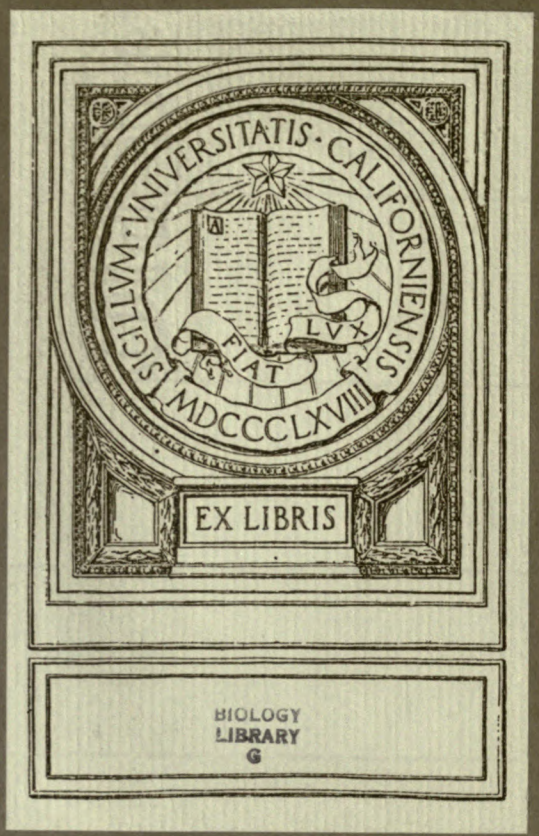


BIOLOGY
LIBRARY
G

AMONG BRITISH BIRDS IN THEIR

NESTING HAUNTS

Printed at the Edinburgh University Press

By T. and A. CONSTABLE

FOR

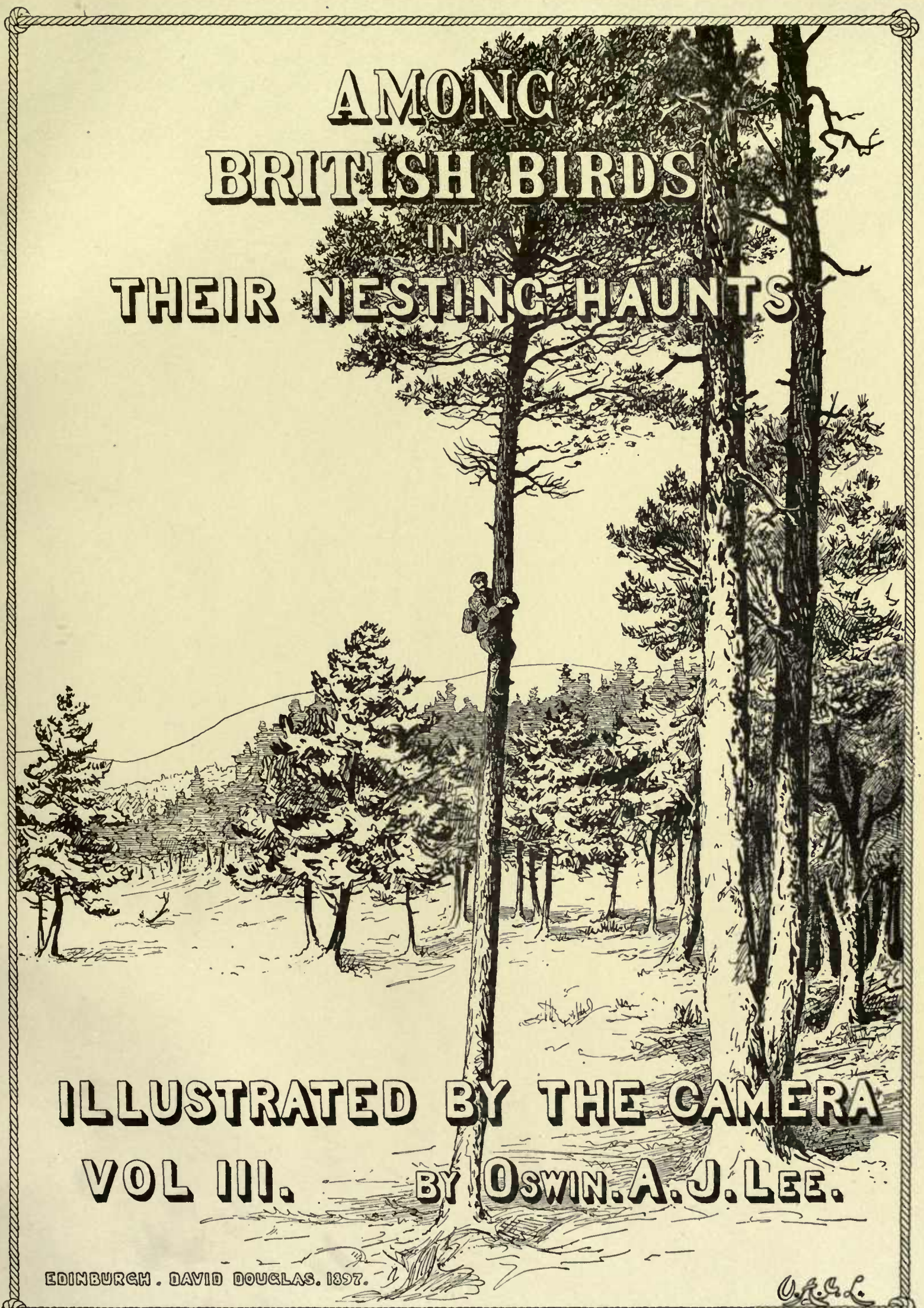
DAVID DOUGLAS

LONDON . . . SIMPKIN, MARSHALL, HAMILTON, KENT AND CO., LTD

CAMBRIDGE . . MACMILLAN AND BOWES.

GLASGOW . . . JAMES MACLEHOSE AND SONS.

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS



ILLUSTRATED BY THE CAMERA

VOL III.

BY OSWIN. A. J. LEE.

EDINBURGH. DAVID DOUGLAS. 1897.

fQL675
L4
v.3
BIOLOGY
LIBRARY
G

BIOLOGY
LIBRARY
G

LIST OF PLATES

ABERNETHY FOREST.—*Title-page.*

			FACING PAGE
RICHARDSON'S SKUA, Plate I.,	June 19th, 1897,	Shetland,	4
DO., Plate II.,	June 19th, 1897,	Do.,	6
REDSHANK,	April 30th, 1896,	Perthshire,	10
SAND MARTIN,	May 29th, 1896,	Aviemore,	14
BLACK GUILLEMOT,	June 15th, 1896,	Island of Mull,	18
RING-OUZEL,	May 6th, 1893,	Tweedsmuir,	22
COMMON TERN, Plate I.,	June 5th, 1896,	Culbin Sands,	26
DO., Plate II.,	June 4th, 1895,	Farne Islands,	28
RED-NECKED PHALAROPE,	June 26th, 1897,	Shetland,	32
WOOD WREN,	June 3rd, 1896,	Morayshire,	36
ARCTIC TERN,	June 4th, 1895,	Farne Islands,	40
GOOSANDER,	May 26th, 1896,	Strathspey,	44
GREENFINCH,		Perthshire,	48
COMMON GULL,	June 28th, 1897,	Shetland,	52
CUCKOO, Plate I.,	May 17th, 1894,	Perthshire,	56
DO., Plate II.,	June 18th, 1897,	Norfolk,	58
HEDGE-SPARROW,	May 3rd, 1896,	Perthshire,	62
HOODED CROW,	April 25th, 1897,	Do.,	66
BLUE TIT,	April 29th, 1896,	Lake of Monteith,	70
WHIMBREL,	June 24th, 1897,	Shetland,	74
ROBIN,	May 8th, 1897,	Perthshire,	80
WREN,	May 7th, 1897,	Lake of Monteith,	84
ROOK, Plate I.,	April 20th, 1897,	Do.,	90
DO., Plate II.,	April 20th, 1897,	Do.,	92
MARSH TITMOUSE,	May 30th, 1896,	Strathspey,	96
GOLDEN EAGLE, Plate I.,	May 20th, 1896,	Lochbuie, Mull,	102
DO., Plate II.,	June 16th, 1896,	Do.,	104
SPOTTED FLYCATCHER,	June 1st, 1893,	Perthshire,	108
TEAL,	May 6th, 1893,	Do.,	112
PHEASANT,	May 10th, 1893,	Do.,	116

819005

			FACING PAGE
Tree Creeper,	May 8th, 1897,	Lake of Monteith,	120
Blackbird, Plate I.,	May 3rd, 1894,	Tweedsmuir,	126
Do., Plate II.,	May 7th, 1897,	Perthshire,	128
Rock Pipit,	June 28th, 1893,	Bass Rock,	132
Magpie,	April 24th, 1894,	Tweedsmuir,	136
Ringdove,	April 12th, 1894,	Do.,	140
Sedge Warbler,	May 30th, 1895,	Perthshire,	144
Dipper,	April 26th, 1897,	Do.,	148
Fulmar,	June 20th, 1897,	Shetland,	152
Dunlin,	May 20th, 1895,	Loch Leven,	156

VIGNETTES

	PAGE
Gulls feeding,	12
Black Guillemots on the Wing,	16
Phalarope Ground—Loch Spiggie,	30
Feather (Greenshank),	34
Goosander and Young,	42
Gull in Flight,	60
Group of Puffins,	72
Robin's Nest on Window,	77
Young Rooks fallen from Nest,	87
Golden Eagle and White Hare,	99
Golden Eagle,	100
Feather (Snipe),	110
Blackbird,	123
Peregrine stooping,	124

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART IX.

RICHARDSON'S SKUA	2	PLATES
REDSHANK	1	"
SAND-MARTIN	1	"
BLACK GUILLEMOT	1	"
RING OUZEL	1	"
COMMON TERN	2	"
RED N. PHALAROPE	1	"
WOOD WREN	1	"

EDINBURGH . DAVID DOUGLAS.

RICHARDSON'S SKUA

Stercorarius crepidatus

RICHARDSON'S Skua is by far the most abundant of the Skuas which visit our Islands. On migration it frequents most parts of the Scotch coast, but its breeding-places are confined to the extreme north of the British Islands. It has several breeding-stations on the Outer Hebrides, chiefly in North and South Uist, one or two on the Inner Hebrides, and on the Orkney and Shetland Islands it is fairly abundant. On the mainland of Scotland it breeds on some of the Caithness moors and in Sutherlandshire. In Ireland and England there are no authenticated records of its having nested, though it is known as a regular visitor to both countries in winter.

The favourite haunts of Richardson's Skua are the open moors and hillsides and low grassy islands. Its flight is strong and swift, rather like some of the hawks. No Gull or Tern has any chance of escape when chased by it, so quickly can it turn and double back. While chasing some unfortunate Gull its screams resemble the syllables '*keeaah-keeaah*,' but its usual note when flying about its breeding-grounds is a loud '*kitti-aah-kitti-yow*,' sometimes shortened into '*kyow-kyow*.'

There are two phases of plumage, a light form and a dark form, but they pair indiscriminately with each other, and the young birds resemble one or other of their parents. There is no intermediate adult plumage.

The Skua's favourite method of obtaining its food is to steal from its neighbours, the Gulls and Terns, robbing them of their newly-caught fish. It will chase some unfortunate bird and buffet it till it disgorges the fish it has caught, pouncing down and seizing its prize before it reaches the water. It also robs their nests of both eggs and young. No garbage thrown upon the beach

comes amiss to it, and it is very fond of following the fishing-boats to pick up any refuse thrown overboard.

It is rather a late breeder, and only arrives at its breeding-grounds in the beginning of May. Eggs are, however, seldom laid before the last few days of the month. Though it is a gregarious bird, its colonies are very scattered, no two nests being found close together; they are usually scattered all over the moor where the birds breed. They are very difficult to find; and although the ornithologist may be surrounded with birds lying on the ground flapping their wings to distract his attention, or dashing down at his head, he may hunt for half an hour most systematically, and yet be unable to find a nest. The surest way is to lie down behind some hummock and watch the females to their nests. At first they will fly about and settle in various places, changing their position every now and then, but gradually they go to their nests and settle down on them; then they can be marked and easily found.

The nest is placed quite in the open on some bare part of the moor, and is merely a depression in the ground scantily lined with a few bits of grass or sprigs of heather. Two eggs are usually laid; on some occasions only one; three are seldom, if ever, found. In most of the colonies I have visited, I have found very light-coloured eggs, as well as the ordinary dark types, and have noticed the extraordinary variety in their shapes. It is quite common to find a very long thin egg and a round one in the same nest. The eggs vary in ground-colour from pale olive green to russet brown, or even pale buff and pale bluish green, blotched, spotted, or fantastically streaked with rich dark brown overlying spots, sometimes almost black, and a few inconspicuous underlying markings of greyish brown. The markings are generally fairly evenly distributed over the entire surface of the shell, but on some specimens they form a ring round the larger end of the egg; they are seldom much larger than a fair-sized pea. The eggs vary in length from 2·49 to 2·10 inches, and in breadth from 1·68 to 1·55 inch. They are absolutely indistinguishable from certain varieties of the Common and Black-headed Gulls.

Young in down are dark sooty brown, slightly paler on the under parts; the bill, legs, and feet black.

PLATE I

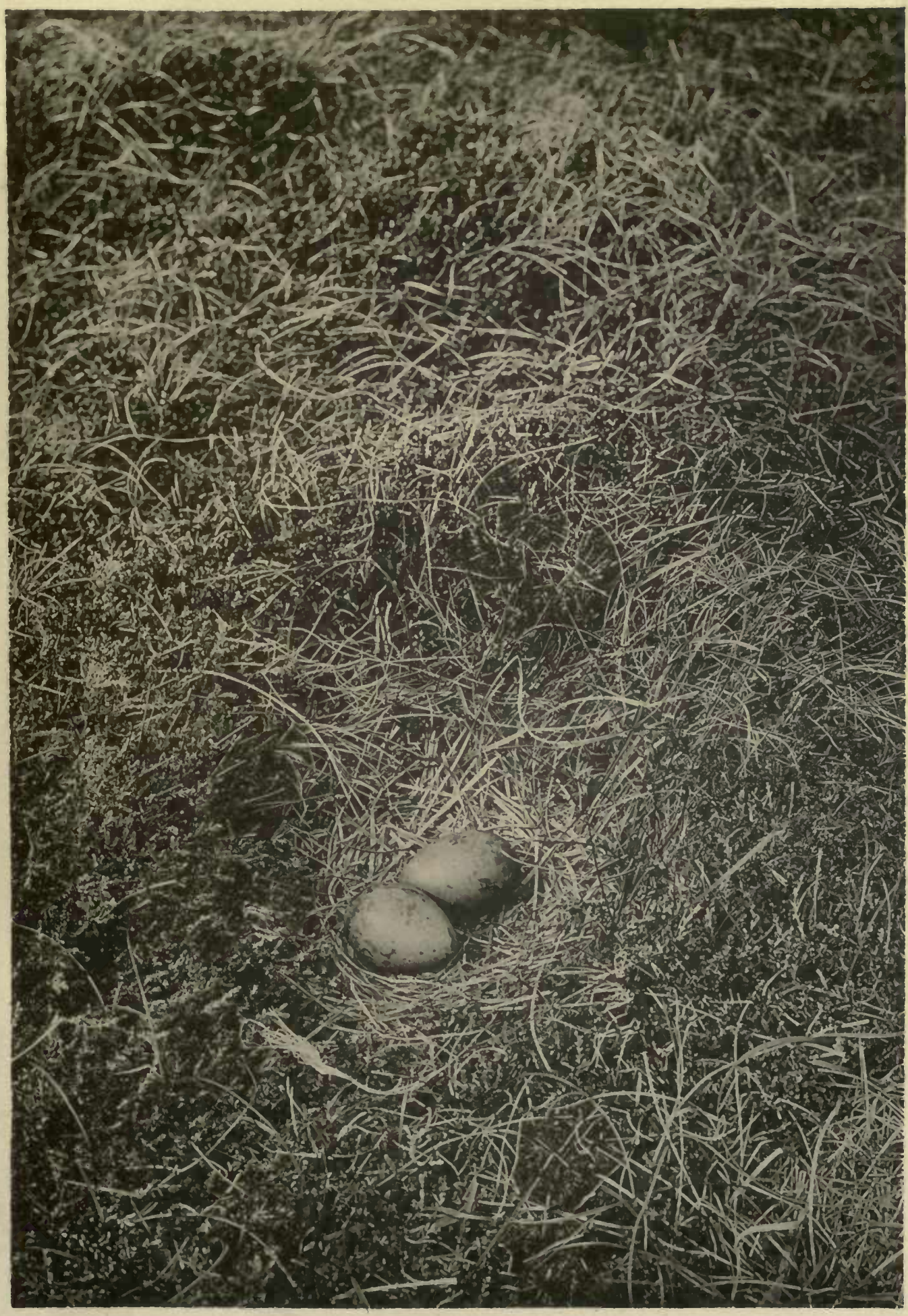
RICHARDSON'S SKUA. *Stercorarius crepidatus*

June 19th, 1897.—The two eggs depicted in this Plate were photographed at a colony in the north of Unst, Shetland. Although many of the eggs were already hatched I found plenty of nests with two eggs, and some with only one.

While I was looking about for suitable nests to photograph, I was struck by the angry birds two or three times, my cap being knocked off. It was most interesting to see their antics on the ground when they tried to draw my attention from their eggs or young; they would lie on their sides and flap their wings, or flutter along as if wounded. One light-breasted bird lay right on its back quite still for a few seconds, and then rolled over, beating its wings.

I saw them chasing each other at a great height, calling incessantly '*kitti aa—kitti aa*,' just like the Kittiwakes, and sometimes darting down with a tremendous rushing noise.

They had a peculiar habit of sitting quite motionless for some length of time on the top of a hillock, especially when I lay down to watch them to their nests.



RICHARDSON'S SKUA. *Stercorarius crepidatus.* *Plate I.*

2/3 NATURAL SIZE.

PLATE II

RICHARDSON'S SKUA. *Stercorarius crepidatus*

June 19th, 1897.—I photographed this nest on the top of a small hillock on the west of Unst, Shetland. One young bird was hatched, and the other was doing his best to get out of his prison. The hole in the egg and the tips of the young bird's bill protruding can be quite distinctly seen in the Plate.

Small bits of fish were brought to the young ones by their parents, who disgorged them on the sides of the nest and fed the young birds with them.

Close to this nest I found a dropped egg of this species; it was pale bluish green, in ground-colour very nearly white, and had one or two very faint scrawlings of a pale reddish brown, and a few small grey underlying markings on it. It was quite fresh, and not addled as I had expected. The young in down are very difficult to find; they exactly resemble the peat in colour, and most of the moor was covered with little lumps scattered about, so that the birds crouching down in the heather were quite indistinguishable from one of these pieces of peat.

RICHARDSON'S SKUA. *Stercorarius crepidatus.*

Plate II.

2/5 NATURAL SIZE.

6

REDSHANK

Totanus calidris

THE Redshank is one of the commonest and most widely distributed of all the Waders found in Great Britain and Ireland. It is a resident in our Islands, and frequents the salt marshes and low-lying parts of our coasts in winter, returning inland to its breeding-haunts when spring comes round again. It breeds in most suitable localities in England and Wales, as also in Ireland; in Scotland it is most abundant and widely distributed, and breeds in most of the adjacent islands, the Hebrides and the Orkneys and Shetland, though not so commonly as on the mainland.

The Redshank is a bird of the swamps, and loves the low-lying marshy fields by the sides of lochs, rivers, and streams; it is one of the first birds to return from the coast in early spring, and its loud ringing cry may be heard in the first days of March among the brooks and swamps where it rears its young. On the shore of the loch, far up among the mountains, where there is only a small delta of swampy ground, where the stream flows into the loch, the Redshank is sure to be found; and even where the marshes have been drained, the bird still lingers, nesting among the tufts of grass and rushes, as if loth to leave its accustomed haunts.

The Redshank is a lively bird, ever on the alert: the slightest suspicion of danger will cause it to rise, whistling its cheery cry, '*tyü-hü-hü*'; it flies round and round the intruder, startling the whole neighbourhood. When alarmed at its nest it will whirl round and round, uttering its cry incessantly—a loud '*tyip-tyip-tyip-tyip*': this is its alarm-note. When five or six pairs of these birds are all shrieking this note, it becomes most irritating, as they will go on for many minutes without ceasing. When alighting again on the ground they have a clear ringing trill, which may

be represented by the syllables '*turr-ee-oo, turr-ee-oo,*' repeated rapidly over and over again.

Inland the food of the Redshank consists of small worms, insects, grubs, and tiny shells, and occasionally the small shoots of marsh plants; in winter chiefly marine creatures are devoured,—sandworms, molluscs, and small crustaceans.

The Redshank commences nesting operations early in April, and eggs may be obtained till well on in May. I have taken fresh eggs of this species in Morayshire in the second week of June. It is rather a sociable bird during the breeding-season, and numbers of its nests may be found in one small patch of ground. The males at this season may often be seen sitting on the tops of fence-posts or on stone walls, bowing and strutting like Ruffs, and spreading their tails. Sometimes they will fly round and round their sitting mate, uttering a trilling cry, clear and ringing; this they do chiefly in the evenings.

The nest is placed on the ground in the middle of some tuft of grass, or under the shelter of some plant of marsh-marigold or tuft of heather. They are generally very artfully hidden by the grass, which hangs over them. Very little lining is used; the centre of the tuft is usually pulled out and trodden down to form a cup for the reception of the eggs, and is sometimes lined with a few scraps of reed, bent, or tiny pieces of heath, or a dead leaf or two. The nest is usually in a damp place, seldom far from water. Four eggs are laid, rather large for the size of the bird—as is the case with most of the Waders,—nearly always pyriform to an unusual degree. They vary in ground-colour from rich yellowish buff to pale buff, sometimes slightly suffused with a greenish tinge, and are blotched, spotted, or streaked with rich dark brown surface-markings and pale brown and purple grey under-markings; some specimens have a few wavy streaks round the large end of the egg. Most specimens have the largest blotches on the big end of the egg, but a few specimens have this order reversed. I have also seen an egg with such faint markings that on first sight it appeared spotless. Some specimens are most beautifully marked, and have a purplish tinge. They vary from 1·85 to 1·65 inch in length, and from 1·35 to 1·70 inch in breadth.

Young in down have rich buff upper parts mottled with black and pale buff under parts. Only one brood is reared in the year.

PLATE I

REDSHANK. *Totanus calidris*

April 30th, 1896.—This nest was placed in the middle of a swampy field near the Lake of Monteith, Perthshire. In this same field I examined no fewer than nine Redshanks' nests in one morning, all of which were in very damp places, and in one case actually in water.

Although this particular meadow has been extensively drained lately, and the grass is well eaten down by cattle, still the Redshank frequent it in the same numbers as of yore when the water used to lie on it in large pools all the summer, and the principal crop was rushes and marsh-marigolds. Down the side of the field is a fence and some dead alder bushes, on the branches of which I have seen the Redshank perch on many occasions, while one could rarely pass in spring without seeing one or two birds on the tops of the fence-posts bowing and scraping and going through other antics of courtship.

REDSHANK. *Totanus calidris.*

1/2 NATURAL SIZE.

SAND MARTIN

Cotile riparia

THE Sand Martin is a common and widely distributed summer visitor to the British Islands, and breeds in most districts where banks suited to its method of nidification are to be found. It breeds in the Outer Hebrides, and in Orkney, but is only occasionally seen in Shetland.

Owing to the partiality of this bird to perpendicular cliffs of earth and sand, it is somewhat local in its distribution; and, as these cliffs or banks are usually found on the shores of lakes, pools, disused quarries and the banks of streams, it seems to be partial to the neighbourhood of water; perhaps, too, the flies on which it feeds are more numerous near ponds and streams. They are the first of the Swallows to leave in the autumn, most of them quitting our shores in September; it is frequently seen in England in the beginning of April on its return from its winter-quarters, which are very little known.

Immediately after its return to this country, the Sand Martin repairs to its breeding-haunts, sleeping in the old holes at night. The depth of the hole depends on the nature of the soil; in soft sandy soil the hole is often three or four feet deep, in hard gravelly soil it is sometimes only eight or ten inches; it is entirely excavated by the birds themselves, and they do it very rapidly, considering the feeble tools with which they are supplied. The work of excavation is chiefly carried on in the early morning; both birds assist, and often begin two or three holes before they finally decide on a nesting-site. Many holes may be seen stopped when only a few inches deep, for no apparent reason whatever. The nesting-chamber is usually slightly higher than the orifice of the hole, showing that the bird understands the principle of drainage. These holes vary considerably in

shape and depth; some are perfectly round, others oval, while a few are like a railway tunnel, with a flat floor; they are usually two or three inches in their largest diameter. At the far end of the excavation a round chamber, some six inches in diameter, is made; in this the nest is built. Many of the holes turn and twist about to avoid boulders or other obstructions.

About the end of May or the beginning of June the birds have begun to lay, and this is the time for fresh eggs. Some colonies are very large, and the face of the earth-cliff is riddled with holes in every direction. On the approach of danger the whole air swarms with these little birds, and their curious rattling twitter fills the air. They will fairly hustle an intruding bird off the scene, chasing it with great pertinacity. Its flight is peculiar and hesitating, and it seems to check itself every now and then as it flies over the surface of the water. On the Broads in Norfolk I have seen them sitting in thousands on the tall reeds, in company with House Swallows and Martins. The eggs of the Sand Martin vary in number from four to six; they are pure white, sometimes faintly spotted with pale brown, which however is easily washed off; they vary in length from ·75 to ·63 inch, and in breadth from ·50 to ·46 inch.

Two broods are reared in the year. As soon as the first broods are capable of taking care of themselves they gather into large flocks and spend the day in hawking after insects, roosting at night on the reeds and small bushes in the marshes. The food of the Sand Martin is entirely composed of small insects,—especially gnats, which are most abundant in the neighbourhood of water. In the autumn, when they gather before migration, they may be seen sitting in thousands along some line of telegraph wires, or on some wire fence. I have seen the branches of a dead oak-tree covered by thousands of these little birds. By the end of September most of them have gone south, but a few stragglers may be seen well on into October.

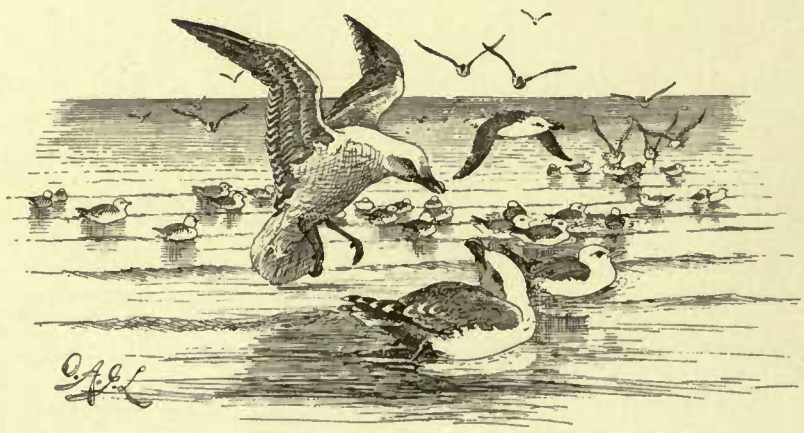


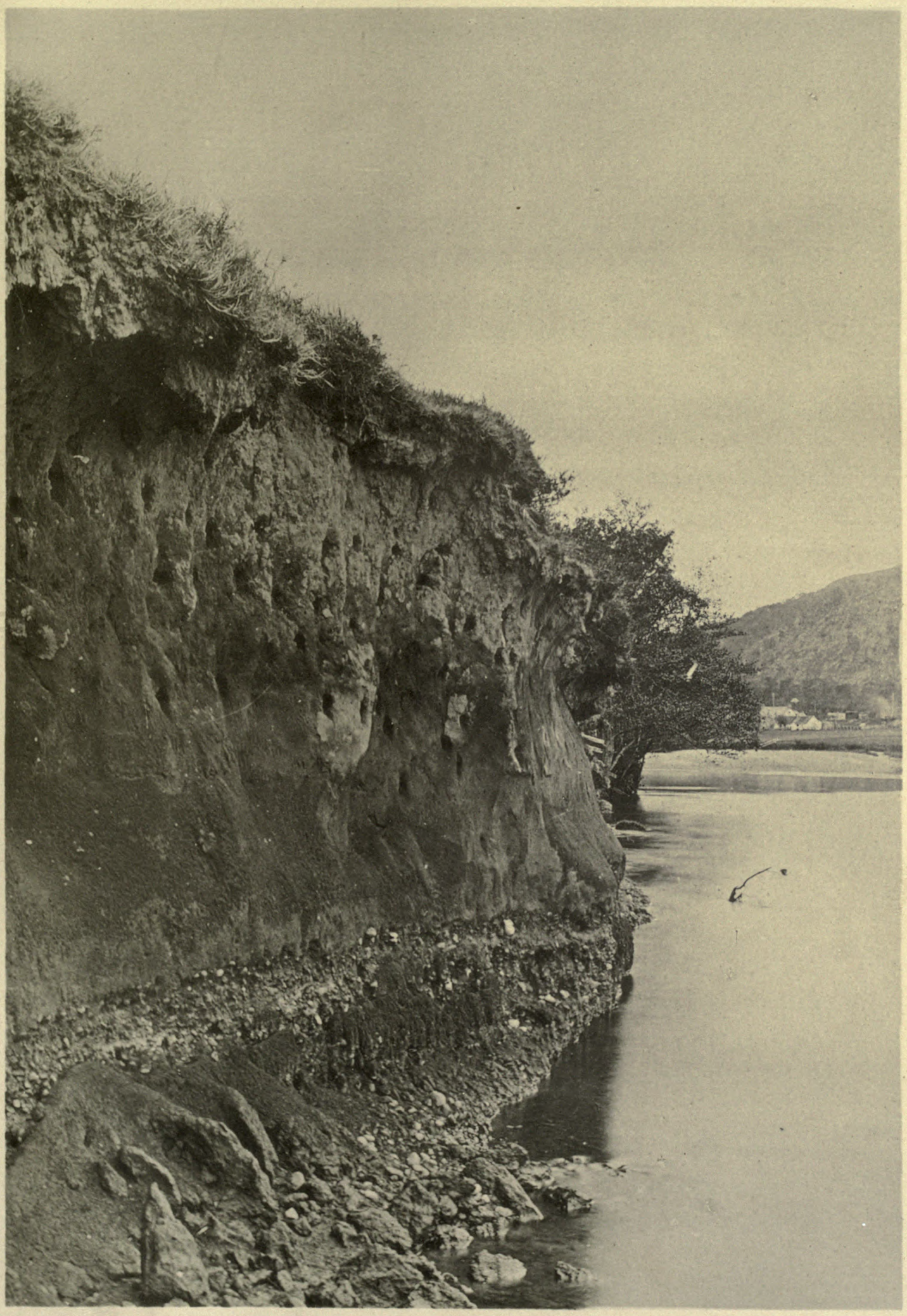
PLATE I

SAND MARTIN. *Cotile riparia*

May 29th, 1896.—This Plate is taken from a very pretty colony on the banks of the Spey below Aviemore. I had to set up my camera in two feet of running water before I could get a satisfactory photograph.

Nearly all the nests contained fresh eggs. Most of them were only a few inches from the mouth of the hole, but the top ones were somewhat deeper, as the soil was soft and easily excavated by the birds. The nests were composed of little bits of dead grass, a few small straws, and a profusion of feathers, chiefly those of the domestic fowl.

At a colony on the banks of the Findhorn I was interested to watch the old birds teaching their young to fly. The young birds sat in the mouth of the hole and the old birds flew close past them, sometimes hovering in front of them and twittering loudly, no doubt trying to induce them to fly. I saw one little bird launch itself forth and flutter across the swiftly flowing stream, while the two old birds flew alongside, and encouraged it to keep up its efforts. Finally the rest of the brood crossed the river in safety, and took up their position on a wire fence on the other side, where I saw them afterwards being fed by their parents.



SAND MARTIN. *Cotile riparia.*

4

BLACK GUILLEMOT

Uria grylle

IN Great Britain the principal breeding-stations of the Black Guillemot are on the north and west coasts of Scotland, including the Hebrides, the Orkneys, and Shetlands. In England it has been recorded as breeding sparingly on the Isle of Mull, and there are a few colonies on the north coast of Ireland. It is occasionally driven inland by severe storms.

The Black Guillemot closely resembles the Common Guillemot and Razorbill in its habits. It lives chiefly on the sea, only repairing to the rocky coasts during the breeding-season. It is a gregarious bird, but is never seen in large flocks like the Common Guillemot. From six to a dozen birds are usually seen together, swimming about among the surf close to the rocks, now and then diving after some small fish. It is not a shy bird, and can be approached within a very short distance. On the water it sits high, and swims lightly on the surface; few birds can equal it in diving, and it progresses with great speed under water, using its wings as well as in the air. The water is never too rough for this dainty little bird, though at times it seems as if it must be dashed to pieces on the rocks. Its flight is straight and rapid, though its wings are so small and narrow, and strings of these little birds may often be observed flying just above the water at a great pace on their way to some favourite feeding-ground.

The food of the Black Guillemot is chiefly composed of young saithe and herring, which are abundant round the coast of Scotland, but small crustaceans and tiny shellfish are also eaten. Most of its food is obtained by diving, at which it is wonderfully expert. During the breeding-season it does not wander far from home, but obtains most of its food in the neighbourhood. The note of the Black Guillemot is seldom heard; it is a rather plaintive whistle, impossible to describe on paper. The young birds, however, call incessantly, and their cry may be described as a shrill '*peep*,' somewhat drawn out.

The Black Guillemot is rather a late breeder, and eggs can seldom be

found before the last few days of May. It is believed to pair for life, as the same cracks and crevices in the rocks are tenanted year after year. No nest is made, but the eggs are deposited on the bare stones, either in some crannies in a cliff—it may be at the very top, hundreds of feet from the sea—or under some flat stone among the débris on the shore. On some of the small islands in Shetland I have found them a hundred yards from the sea, under some flat rock in the middle of a grassy island, and in Unst I took two beautiful specimens from an old stone wall fully a hundred and fifty yards from the sea. Sometimes the eggs can be distinctly seen from outside, at other times they are ten or twelve feet from the orifice. They are generally two in number, though it is said that three are occasionally found. They resemble miniature Razorbill eggs; not much variation is observed in the character of the markings. The ground-colour varies from creamy white and pale buffish yellow to very pale bluish green, blotched and spotted with overlying marks of rich brown, sometimes purplish black, and large conspicuous under-markings of inky grey. Some specimens have the markings very small, and distributed fairly evenly over the entire surface of the egg. On others the blotches are large and confluent, forming irregular patches on the larger end of the egg, and in some instances they are collected in a zone. They vary in length from 2·50 to 2·17 inches, and from 1·70 to 1·45 inch in breadth.

Both birds assist in the duties of incubation, as I have seen them relieve each other; each in turn fetching food to their sitting mate, generally small coal-fish. They do not evince much anxiety when their nesting-haunts are invaded, flying off to the sea with much whirring of their short wings, where they swim restlessly about until the intruder departs.

Young in down are uniform brownish black.

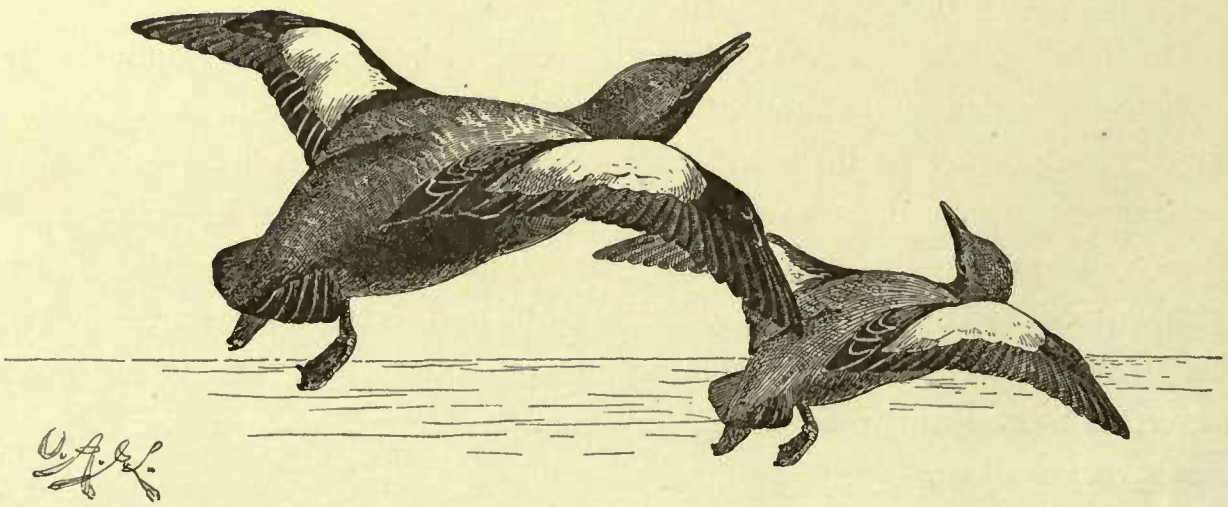


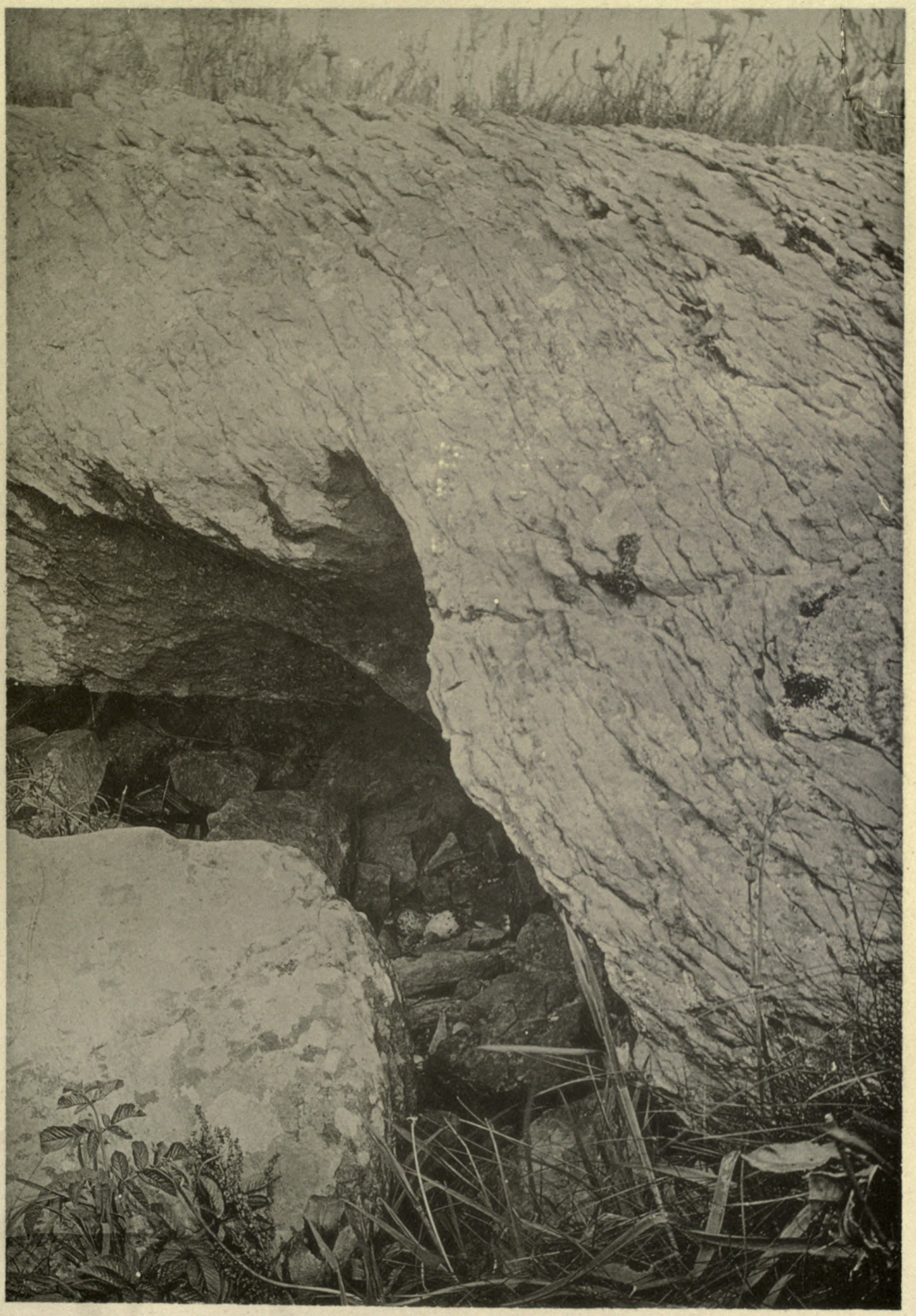
PLATE I

BLACK GUILLEMOT. *Uria grylle*

June 15*th*, 1896.—This nest was under a huge block of rock on one of the Garvelloch Islands off the coast of Mull. The eggs were quite visible from the outside, as appears in the Plate. When I came up the little bird was sitting on the eggs with her back to me; on my appearance she hurried off into the darkness and flew away from the other side of the rock, having no doubt escaped by the back entrance.

The eggs were very highly incubated, and under a stone not far off I found two little black downy young ones, which must have been hatched some time. One or two fragments of tiny herrings were lying beneath the stone, and we saw one of the old birds fly into the hole with another fish held crosswise in its bill, soon after we moved from the spot.

Another nest on the same island was quite inaccessible. It was placed in a vertical crack in the rocks about four inches wide and perhaps eight feet deep; we could just make out the two eggs in the darkness.



BLACK GUILLEMOT. *Uria grylle.*

1/6 NATURAL SIZE.

RING-OUZEL

Turdus torquatus

THE Ring-Ouzel is a regular summer visitor to Great Britain, and breeds on the highlands and hills in suitable localities. In Scotland and Ireland, as also in the north of England, it is a fairly common bird, and has been recorded as nesting in some of the southern counties of England. Its winter-quarters are in Southern Europe, North Africa, and Asia Minor.

The Ring-Ouzel is the only migratory Thrush that visits our shores to rear its young. Its favourite haunts are the wilds of the mountains, and its plaintive whistle may be heard on most of our hills and mountains, however rugged and wild. Wherever the Golden Plover and the Red Grouse breed the Ring-Ouzel is almost certain to be found. It prefers the wildest solitudes of the mountains, where there are rocks and heather, and is especially fond of the banks of wild mountain streams. It arrives in our country about the end of March and the beginning of April, and from that time till its departure in late autumn it haunts the uplands.

Shortly after their arrival at their breeding-haunts the males begin to sing. It is a somewhat monotonous performance, but loud and cheery, especially among the wild and lonely mountains. It rather reminds one of the Starling's song, and yet possesses some characteristics of the Blackbird's mellow notes. The bird first utters a few low musical notes, followed quickly by several harsh rasping tones, and remains silent for a minute or so before repeating the performance. The call-notes of the Ring-Ouzel are somewhat varied; sometimes three low, plaintive whistles may be heard, at other times the male has a sharp, piping cry and the alarm-note is '*tac-tac-tac*,' frequently repeated. The food of the Ring-Ouzel is varied; like the Blackbird he may be seen on the grassy pasture-lands among the hills, searching for worms in the early

morning, or picking the small slugs from the blades of grass. He also searches the droppings of sheep and cattle for the small beetles and insects which abound there. The snail-shells found among the coarse vegetation are carried by the Ring-Ouzel to some convenient stone, where they are broken to pieces and the contents devoured. In the autumn wild fruits and berries are his favourite food, and he sometimes pays the penalty for theft in the gardens near his haunts, being caught in the nets over the currants and strawberries. Ivy-berries, elder-berries, wild cherries, brambles, and especially the fruit of the mountain ash, are eagerly devoured. Soon after their arrival, and before they have paired, Ring-Ouzels may often be seen on the moors in large flocks like Fieldfares; at this time they are very wild and wary.

In the end of April and the beginning of May nest-building commences. The nest is generally placed on the ground under some tuft of heather or some rocky slope, but it is sometimes found low down in a bush. A favourite situation is on some rock face where the tufts of heather grow out of the fissures in the rock and conceal the nest. It is rather a well-made nest; the outside is made of grass and a few pieces of heather or dead leaves; this is then cemented over inside with a layer of clay or mud, being finally thickly lined with a layer of fine dry grass. In appearance the nest cannot be distinguished from that of the Blackbird.

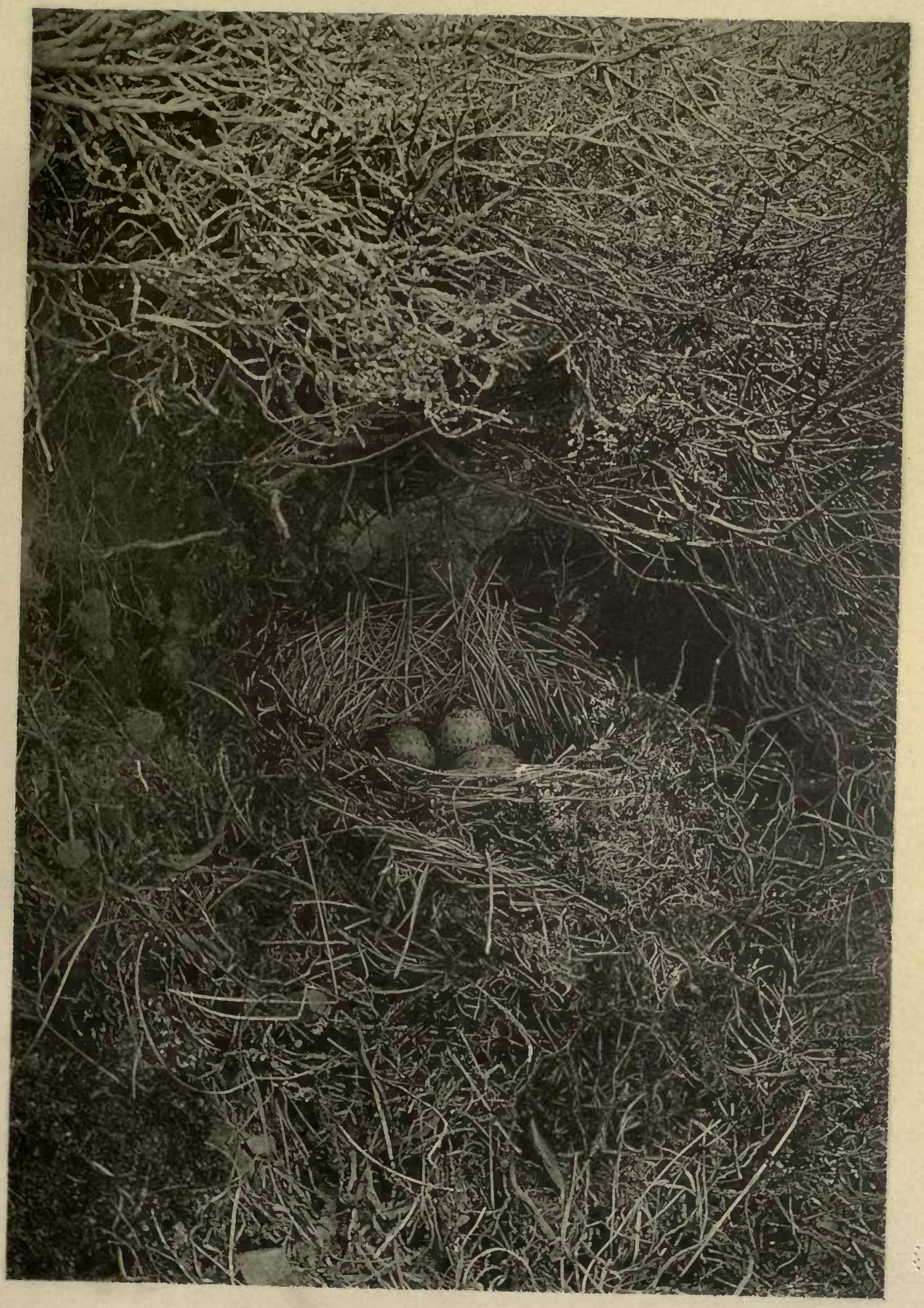
The number of eggs laid is usually four or five; they are very often indistinguishable from those of the Blackbird, but are, as a rule, more boldly marked. They are bluish green in ground-colour, blotched with reddish brown. There are two or three varieties — one, rather long in shape, pale in ground-colour, with very small markings all over the shell; a second is very round, dark greenish in ground-colour, with bold blotches sparingly distributed over the surface; yet another is brownish in ground-colour, streaked with light brown markings and a few purple spots, the markings forming a zone round one end of the egg. They vary in length from 1·30 to 1·10 inch, and in breadth from ·9 to ·79 inch.

The old birds defend their young most bravely, and even when the nest is half finished they guard the vicinity with great jealousy.

PLATE I

RING-OUZEL. *Turdus torquatus*

May 6th, 1893.—I photographed this nest on the steep side of a small rocky glen in Tweedsmuir, Peeblesshire. I had seen the birds, and heard their plaintive notes on two occasions in the same spot. I watched the female for nearly an hour before she went to the nest, and it took me three or four minutes to find it after I had marked the spot. Just as I had discovered it, a bird rushed past my head, and turning round I saw the Ring-Ouzel sitting on a stone not ten feet from me. As I stooped down to examine it more closely she flew past again, almost brushing me with her wings. All the time I was there they waked the echoes of the glen with loud cries, and it was not till I had disappeared over the shoulder of the hill that peace was restored.



RING-OUZEL. *Turdus torquatus.*

1/2 NATURAL SIZE.

COMMON TERN

Sterna fluviatilis

IN the north of Great Britain this species is not nearly so abundant as the Arctic Tern, but occasional colonies are met with, all up our coasts as far as the Orkney Islands; south of Yorkshire, however, it is the most abundant species. In Ireland it breeds in most suitable situations round the coast, as well as on some of the inland loughs, and is more common than the Arctic Tern.

The Common Tern arrives on our coasts about the end of April, collecting into flocks again during the latter half of July and August, and gradually working south during August and September. It retires to its accustomed breeding-haunts soon after its arrival in our Islands, and is especially partial to low-lying islands and rocks, where it is comparatively safe from disturbance. It is very fond of the shallow waters of quiet estuaries, and often follows the course of some of our larger rivers, at times breeding on the small islands in them. It is a charming sight to see a flock of these graceful birds following some shoal of small fish: they hover above it in a whirling, confused cloud, each bird intent on its prey, swooping down on those which come too near the surface, or plunging into the water with a splash in their anxiety to capture their food. It seldom disappears entirely below the surface like the Gannet, though sometimes it is hidden for an instant by the shower of spray which it has raised. On land it walks awkwardly, and seldom alights on the ground except at its nest. Its flight is slow and easy, rather like that of a Gull, but when chasing each other in the pairing season they turn and twist and dart about in a wonderful manner. When gorged with food they may be seen lying on the sand on the shore, and in stormy weather they sit on the shore in flocks in some sheltered place.

The food of the Common Tern consists principally of young fish, sand-eels, and small crustaceans, but all sorts of fry are taken. It is almost entirely obtained upon the wing, and the bird may often be observed perched on the stakes of the salmon-nets watching for any small fish that may come near. Its ordinary cry is a long-drawn '*keeee-aarrr*,' sometimes '*krreeee*,' but at the nest a constantly repeated '*kik-kik*' is heard, especially if its young or eggs are in danger.

The Common Tern nests in some places in huge colonies; perhaps the best known of these is on Staples Island at the Farnes, off the coast of Northumberland; there the birds nest in thousands. I have seen two or three small colonies of this Tern in Morayshire, and one very picturesque colony I saw was on a small island near Inverness, on the river Ness. They begin to lay in the beginning of June, sometimes late in May. Two or three eggs are laid, sometimes on the bare ground, but never with very much lining to the nest. Most nests I have seen have been mere hollows lined with a few bits of grass and pieces of sea-campion, occasionally a few feathers or pieces of dried seaweed.

The eggs vary in ground-colour from pale greyish buff—sometimes almost white—to brownish buff, sometimes olive green of various shades. They are marked with surface-spots of very dark brown, sometimes purplish black and inky grey underlying markings. Sometimes the spots are distributed fairly evenly over the entire surface of the egg; sometimes they are confluent, and form large blotches of colour on the large end of the egg, or form an irregular zone round it, and sometimes they are small, and few in number. They go through an infinite number of varieties, and cannot be distinguished from those of the Arctic or Roseate Terns. They vary in length from 1·85 to 1·48 inch, and in breadth from 1·35 to 1·15 inch.

Young in down are brownish buff mottled with black on the upper parts, and the under parts are pure white; the throat is dark brown. The bill of the adult Common Tern is orange red tipped with black, while that of the Arctic Tern is entirely pinkish red. The tarsus of the Common Tern measures three-quarters of an inch in length, that of the Arctic Tern only half an inch.

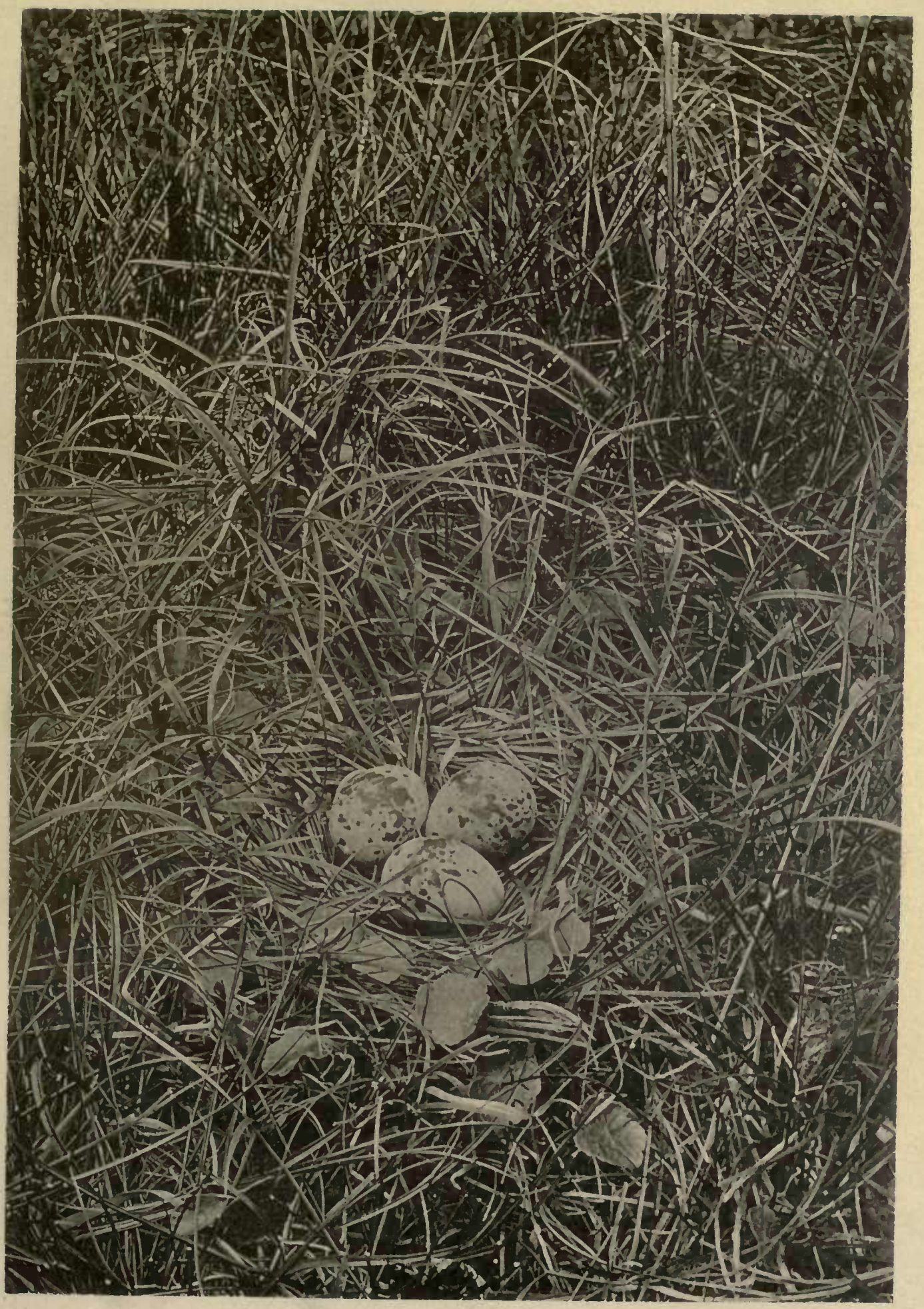
PLATE I

COMMON TERN. *Sterna fluviatilis*

June 5th, 1896.—This nest was placed in a small grassy moor on the Culbin Sands, Morayshire, not far from the sea. There was a pretty large colony of Common Terns there that season, though in 1887 I found only Arctic Terns at this particular place.

In spite of the mild early spring this was the only nest which contained its full complement of eggs, most of the others having only one egg, and one or two being still empty.

Close to this little moor was a small marshy loch, over which the Terns were constantly hovering; there are no fish in it, so they must have been after insects of some kind. I have often seen the Black-headed Gulls chasing the ghost moths in the grass fields in the summer evenings, catching them with quite an audible snap; so perhaps the Terns were devouring the dragon-flies, which abound on the reeds.



COMMON TERN. *Sterna fluviatilis.*

2/3 NATURAL SIZE.

Plate I.

26

PLATE II

COMMON TERN. *Sterna fluviatilis*

June 4th, 1895.—The nest depicted in this Plate was on Staples Island, one of the Farnes; it was built among the drift-weed on the shore, close down to high-water mark.

As we landed on the island the Common Tern rose in thousands and wheeled screaming above our heads, crossing and re-crossing each other like some whirling snowstorm; every now and then one bird would swoop down and rush past our heads, screaming, to try and drive us from its nest. In some places it was very difficult to walk without crushing some of the eggs, which lay about all over the ground, so close were they laid to each other.

Close down to high-water mark we saw quite a number of Arctic Terns, but the chief colony was at one end of the island, distinct from the huge colony of Common Terns.

COMMON TERN. *Sterna fluviatilis.*

Plate II.

3/4 NATURAL SIZE.

RED-NECKED PHALAROPE

Phalaropus hyperboreus

THE Red-necked Phalarope is a summer visitor to our Islands, but its only breeding-grounds are in the Shetlands and the Outer Hebrides. It has also been recorded as breeding in Caithness and Sutherland. In the rest of our Islands it is only known as a rare visitor.

The favourite breeding-haunts of the Red-necked Phalarope are the swamps where there are little pools of water and tussocks of short, soft grass. Nothing can exceed its tameness; it will swim about in the water among the leaves of the bog-bean, like some miniature Water-hen, within three feet of the observer. It progresses in a series of jerks in a zigzag direction, bobbing its head like a Water-hen; it floats very lightly on the water, and rises with ease in the air without any splashing. It can fly with great rapidity, and may often be seen twisting about like a Snipe as it flies.

The food of the Red-necked Phalarope is composed of small worms, tiny fresh-water shells, crustaceans, and insects. I watched it picking small flies from the surface of the water as it swam, and searching the leaves of the bog-bean as it paddled about. Its call-note is a clear, sharp '*wick*, *wick*,' repeated at short intervals, and I heard the males uttering a curious rasping note as they careered swiftly over the marsh in wide zigzagging circles.

It arrives in Shetland early in June, slightly earlier in the Outer Hebrides, but eggs are not laid till nearly the middle of the month. It does not seem to breed on the little islands in the pools of water as a rule, but prefers to make its nest among the grass round the edge of the swamp. I spent a long time watching the little birds on the water, but as it was well on in the month saw chiefly the females. In this species the male is the more silver-coloured, and does most, if not all, of the sitting on the eggs, besides tending the young

birds most carefully. Now and then I saw a dull-coloured bird, but it generally stayed only a short time, and then flew away to its nest again.

The nest is usually placed in the middle of a thick tuft of grass, and is sometimes more than a foot above the surface of the actual ground; it is nearly always lined with a few dry stalks, and little bits of the dead roots of water-plants; most nests I have seen have been very shallow.

Four eggs are laid, with their small ends pointed inwards; they vary in ground-colour from pale yellowish buff to pale olive green, or pale yellowish brown, and are thickly blotched and spotted with pale brown, rich amber, and blackish brown surface-markings and a few underlying spots of greyish brown. The markings are much bolder and richer on some specimens than on others, and on some eggs they take the form of streaks lying obliquely to the longer axis of the egg. As a rule the largest markings are on the big end of the egg. They vary in length from 1·20 to 1·05 inch, and in breadth from ·85 to ·79 inch.

Young in down are most beautiful little creatures; they are buffish chestnut on the throat and upper parts, mottled with black on the back and head, two nearly white lines down the back, and white under parts, below the breast, which is buffish in colour. Only one brood is reared in the year; but if the first clutch be destroyed, a second set of eggs is often laid. When the young are hatched, the old birds are most attentive to them. I came across a brood of these charming little birds in Shetland and watched them for some time; the old bird was so tame, and came so near me, in his efforts to lead me from his young, that I dropped my cap over him and took him in my hand. On releasing him again he fluttered about on the ground quite close, and at last succeeded in getting his little charges into the water, when they swam away and were soon hidden among the leaves of the bog-bean, which covered most of the little pools.

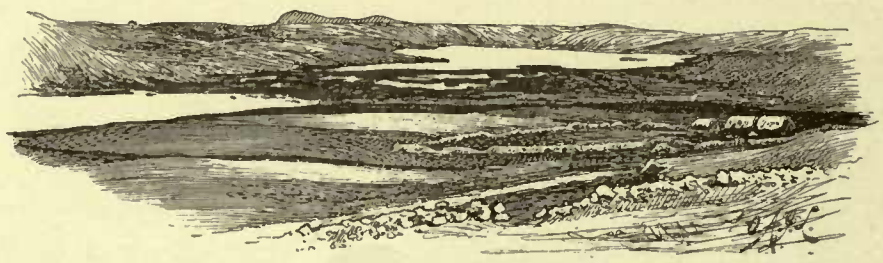


PLATE I

RED-NECKED PHALAROPE. *Phalaropus hyperboreus.*

June 26th, 1897.—I photographed this nest in some marshy ground beside a loch in the south of the Mainland of Shetland. I was wading about in some small pools, watching five or six of these beautiful little birds, when I saw one rise and fly away some distance to a flat piece of ground. I marked the place and hurried towards it. On my way I put up another bird, so, dropping my handkerchief, I went to the first place, and put up the little bird from her nest. It contained four very typical eggs, and was concealed among some leaves of the bog-bean. I took a photograph, which is here reproduced, and went back to my handkerchief; as I stooped to pick it up, the little bird was about two feet from it, and disclosed the second nest, containing three eggs.

I came across two broods already hatched, and spent some time watching them. They were so absurdly tame that the old birds fed their little ones with small insects within ten feet of us. The young ones, though evidently not long hatched, picked at the leaves and grasses as they walked about on their little shaky legs. They seemed much more at home on the water, where they swam with ease, uttering a feeble '*peep-peep*' from time to time.

RED-NECKED PHALAROPE. *Phalaropus hyperboreus.*

3/5 NATURAL SIZE.

Cornell
University Library

WOOD WREN

Phylloscopus sibilatrix

ALTHOUGH somewhat more local in its distribution than its congeners the Willow Wren and Chiffchaff, the Wood Wren is not an uncommon bird in the British Islands, and is found in England, Scotland, and Ireland, very plentifully in some localities. It is a summer visitor to our Islands, wintering in the north of Africa.

The Wood Wren arrives in this country nearly a fortnight later than its congeners, and in Scotland its song is rarely heard until early in May. They arrive in perfect plumage, and almost rival the delicate yellowish green of the young leaves among which they pass the day; on a sunny morning the woods appear to be full of them, and they seem to answer each other in song from far and wide. For the first few days after their arrival they are somewhat silent, and only their long-drawn, plaintive call-note, '*tee-ü, tee-ü,*' is to be heard. After a few days' rest, however, they burst forth into full song. The males seem to devote their whole attention to nothing else; they sing all day, sometimes when flying through the air, more often sitting on some branch—wings, tail, and throat quivering with the exertion. When once heard, the song of the Wood Wren can hardly be forgotten; it commences with a few chirping notes, gradually increasing in rapidity till it ends in a peculiar shivering trill, the note gradually descending chromatically. It may be represented on paper as follows, '*tit-tit-titr-rit-r-r-rr-rrrr.*' Often at the end of the song the call-note is repeated three times slowly, '*tee-ü, tee-ü, teee-üü.*'

The food of the Wood Wren is almost entirely composed of insects and their larvæ. This they obtain among the leaves of the trees and undergrowth, searching under the leaves like the Tits, sometimes hanging under a branch like a Tit, or hovering like the Willow Wren. They are most restless little

birds when feeding—never still for an instant, sometimes darting after some passing insect, or chasing each other in and out among the twigs. In early autumn I have seen them eat the ripe elder-berries which had fallen on the ground, and I took the skins of four of these berries from the stomach of a bird of the year. They are very fond of the small green caterpillars which may be seen hanging by a silken thread from the leaves in summer. It has a curious habit of choosing some particular tree as its abode, and I have heard a male sing daily throughout the entire summer from the same tree. Its flight is undulating, and it has a peculiar habit of dropping down with half-expanded wing on to its perch, reminding one rather of the Tree Pipit.

Nest-building commences in the end of May, eggs being laid in the last few days of the month, or early in June. The nest is built always on the ground. It is very difficult to find, and I have noticed that as a rule it is some little way from the spot where the male is wont to sing. A small hollow is usually prepared under the shelter of some tuft of grass or small plant. In this the nest is built. It is semi-domed, like that of the Willow Wren, but is never lined with feathers like the nest of that bird, being built of dry grass, moss, and leaves, and lined with fine grass or horse-hair.

From five to seven eggs are laid, which are most beautiful when perfectly fresh. They are pure white in ground-colour, freckled and blotched with dark purplish brown and underlying markings of violet grey. Some specimens are much more handsomely marked than others; on some the markings form a zone round one end of the egg, on others they are confluent, and form large pale blotches of purple, while some are entirely covered with minute specks. They vary from ·70 to ·62 inch in length, and from ·60 to ·54 in breadth, and can hardly be compared with the eggs of any other British bird; some eggs are like miniature eggs of the Common Swallow, but have no red-brown spots like the eggs of that bird.

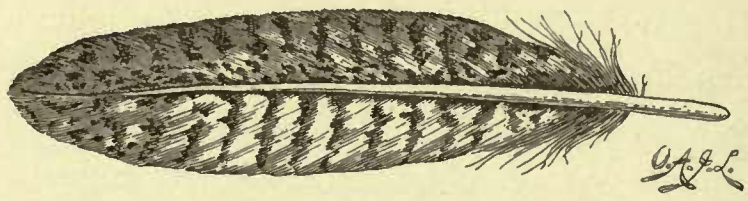


PLATE I

WOOD WREN. *Phylloscopus sibilatrix.*

3rd June 1896.—This Plate was taken from a lonely nest I came across on the banks of the Findhorn in Morayshire. I heard the male singing, and watched him for nearly three hours before I saw him join his mate. I watched her till she went back to the nest, and the rest was simple. Unfortunately it was a damp day, with a fine drizzling rain coming steadily down, and as it was my last day in the neighbourhood, I had to photograph the nest under these unfavourable conditions.

WOOD WREN. *Phylloscopus sibilatrix.*

1/2 NATURAL SIZE.

CAMBRIDGE

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART X.

ARCTIC TERN	1 PLATE
GOOSANDER	1 "
GREENFINCH	1 "
COMMON GULL	1 "
CUCKOO	2 "
HEDGE-SPARROW	1 "
HOODED CROW	1 "
BLUE TIT	1 "
WHIMBREL	1 "

EDINBURGH. DAVID DOUGLAS.

ARCTIC TERN

Sterna macrura

THE Arctic Tern is without doubt the most abundant of all the Terns which visit our Islands to rear their young. It breeds in most suitable localities throughout our Islands, from the Shetlands to the Scilly Isles.

The Arctic Tern differs very little from its congener the Common Tern in its habits. Like that bird, it loves an isolated spot in which to rear its young, preferring some low rocky island, or sandy promontory which is not much disturbed. It arrives on our coasts during the latter half of April, and commences its migration in the end of August, gradually working southwards through September and October. Like all the Terns it is gregarious, and breeds in colonies, varying in numbers from only a few pairs to thousands of birds. It prefers uninhabited islands for nesting purposes, and is often found associating with the Common Tern, and sharing the same island, but the respective colonies are usually separate. On the wing, it is a most graceful bird, beating along the coast with slow easy motions of its long pointed wings, hovering now and then, like some Hawk, as it spies some unfortunate fish, and plunging down into the water with a tremendous splash, rising anon with its silvery prey held crosswise in its sharp bill. It rarely perches on the ground, except during a storm, or when gorged with food, but is often seen sitting on the top of some post in the water. Occasionally it may be seen floating lightly on the water, its wings and tail held high; but it never dives, and seldom swims for any distance; even when wounded, it continues to attempt to fly rather than seek safety by swimming out to sea.

The cry of the Arctic Tern is a loud long-drawn '*keee-aarr*,' or '*krr-eee*,' common to most of the Terns, but its alarm-notes are a short sharp '*kik*,'

sometimes '*keeer*.' Its food is chiefly composed of small fry, little fishes, small crabs, shrimps, sand-eels, and other marine creatures.

The breeding-season commences in the end of May, and from that date till well on in June fresh eggs may be obtained. The favourite situations for its nests are among the long lines of broken reeds, dead grass, bits of cork, wood and seaweed which mark the limit of the high storm-tides of winter. Sometimes the eggs are laid on the bare sand, or amongst the coarse pebbles and shingles close down to high-water mark; very little trouble is taken, as a rule, in the construction of the nest. A few scraps of dry grass, or pieces of seaweed, straws, or feathers are deposited in the hollow prepared for the reception of the eggs. In one place only I have seen large bulky nests; this was on the huge beds of coarse gravel on the outside of the old Bar in Morayshire. Here I have seen large collections of dead seaweed, sticks, dead grass and feathers of Gulls.

The eggs of the Arctic Tern are from two to three in number, and go through the most extraordinary varieties of colour and markings. They may have the ground-colour any shade of buff or buffish brown, and olive greens and browns, sometimes reaching quite a rich dark brown. They are blotched, spotted, and streaked with rich dark brown and purplish black surface-markings and large inky grey underlying spots. As a rule they are more boldly blotched than those of the Common Tern. One most beautiful variety has the ground-colour pale pea-green. Its surface-marks are few in number, large, and of a rich reddish brown, and there are large irregular underlying markings of purplish grey. They vary in length from 1·58 to 1·47 inch, and in breadth from 1·22 to 1·05 inch.

Young in down are greyish brown on the upper parts, mottled with black; the throat, forehead, and sides of the head are dull black, and the under parts are pure white suffused with a brownish tinge on the flanks and vent.

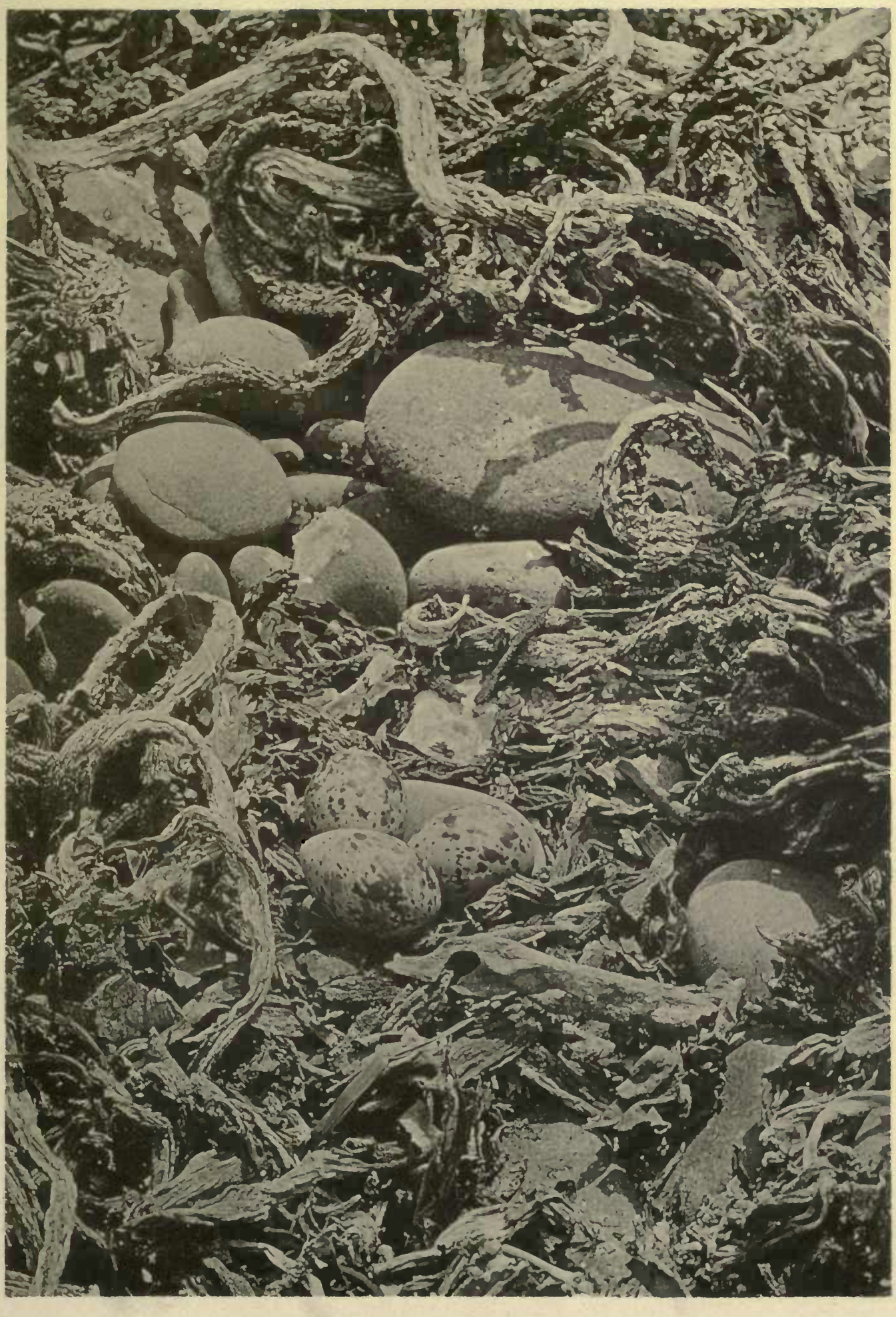
The Arctic Tern guards its breeding-haunts most jealously, and should some Gull or Skua come too near their colony, it is mobbed by the entire community and hastily driven off. I watched with great interest a tremendous battle between three or four Arctic Terns and a Richardson's Skua, on a small island in Shetland. The Skua eventually settled on the ground; but the little birds swooped down on him so fiercely, one after another, that the robber had to beat a hasty retreat.

PLATE I

ARCTIC TERN. *Sterna macrura.*

June 4th, 1895.—This nest was photographed on Staples Island, one of the Farne group, off the coast of Northumberland. The drift-weed at high-water mark was covered with their eggs, and in some places it was very difficult to avoid stepping on some of them. We saw hundreds of nests, and the varieties of colour were most wonderful. I took two perfectly white eggs, and one of a beautiful dull green, absolutely spotless; the other eggs in each case were perfectly normal in colouring and size, so I was at a loss to account for their peculiarity.

All the time we were at this colony the whole air was filled with thousands of Terns, both Common and Arctic, all shrieking at once, so that the Babel was tremendous. The Black-backed Gulls were constantly attempting to rob the nests, but were almost invariably driven off by the pugnacious little Terns, before they could achieve their intention. The larger Sandwich Terns, however, were not so brave in defending their nests, and their eggs were destroyed wholesale.



ARCTIC TERN. *Sterna macrura.*

3/4 NATURAL SIZE.

GOOSANDER

Mergus merganser

DURING winter the Goosander is a fairly common visitor to the British Islands, and is met with in most suitable localities both on the coast and inland. It is perhaps not quite so abundant in Ireland. It breeds sparingly in Strathspey and the neighbouring districts, and has occurred in a few other localities in the north of Scotland.

The Goosander is a slightly larger bird than the Mallard. It swims and dives with great ease, but walks very awkwardly on land, as its legs are set very far back, like those of the Cormorant. It flies with great ease and rapidity, as its wings are longer than is usual with diving ducks. It seems to prefer rivers and inland lochs to the sea-coast, and likes a wild part of the country, abounding in forest-trees, swamps, rivers and rocky shores of lakes.

Its note is wild and harsh, not unlike the guttural '*karrr, karrr*' of many of the Diving Ducks. Its food consists principally of fish, which it obtains by diving, but it also takes water-insects and small molluscs. Its serrated bill allows it to hold its slippery prey with ease. When captured, a fish is always brought to the surface to be swallowed, and the bird generally drinks after accomplishing this, and stretches out its neck two or three times.

The Goosander is a fairly early breeder, eggs being laid in April. In this country the site usually chosen is a hollow tree, generally an alder, as that tree affords the best holes for the purpose, but there are one or two records of the nest being found in holes in the ground, generally in a peat bank or under the root of some tree. In Strathspey there are many alders with holes in them specially adapted for nesting sites, and in this locality the Goosander has increased rapidly during the last few years. I have seen pairs of Goosanders on most of the lochs in the Trossachs, often as late as

the middle of May, but have been able to procure no records of their having bred in the neighbourhood.

Nests which I have examined are usually but scantily lined with a little moss mixed with a small quantity of pale grey down. The hole is sometimes very deep. I found one nest in Rothiemurchus, where the bird entered at a round hole some eleven feet from the ground, while the nest was at the bottom of the hollow trunk on a level with the ground; the eggs in this nest could be distinctly seen by applying the eye to a small crack in the trunk. This nest I discovered when tapping the trees for Crested Tits' nests; on hitting the tree with my stick I heard a tremendous scrambling inside, and presently the duck emerged from the round hole above my head and flew away. This nest was again tenanted in the following year.

The Goosander lays from seven to twelve eggs; they are creamy white in colour; sometimes, but rarely, a rich pale buff, and rather glossy, with a somewhat smooth grain. They resemble the eggs of the Scoters; but the down, which is uniform greyish white, is a safe identification, as also the site of the nest. They vary from 2·35 to 2·48 inches in length, and from 1·9 to 1·78 inch in breadth.

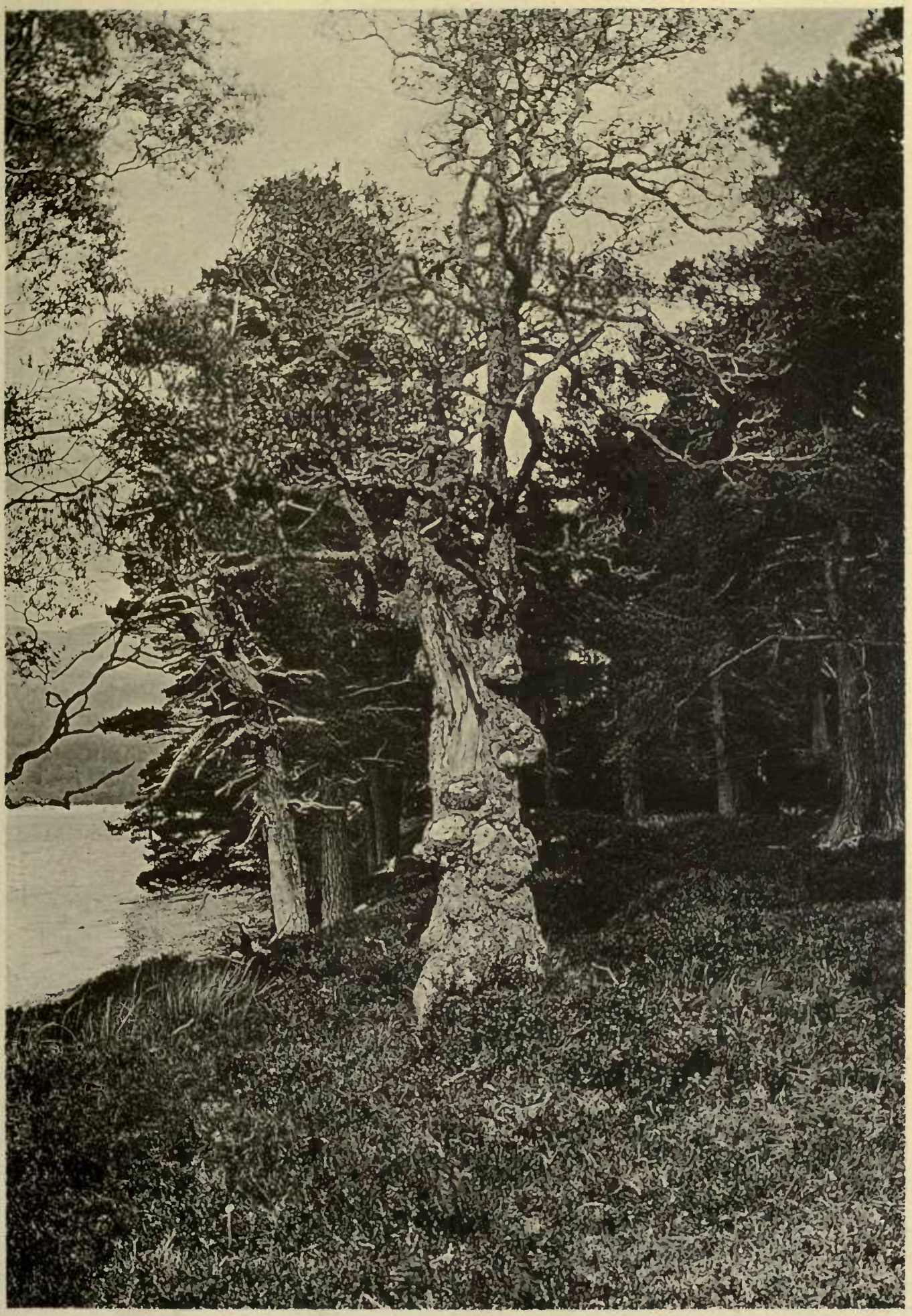
PLATE I

GOOSANDER. *Mergus merganser*

May 26th, 1896.—The tree depicted in this Plate was in Glen More forest, Strathspey, and contained a Goosander's nest. This tree has been tenanted yearly since 1894 to my knowledge, possibly by the same pair of birds.

About three miles from this place, I came upon another hollow alder containing a nest of this species, on a flat piece of ground in a steep glen beside a rushing stream. I spent two mornings watching this nest, and was rewarded by seeing the old bird remove her nine ducklings from the hole, which was vertical, and nearly six feet deep. How she got up inside I cannot tell, as the hole was not wide enough to enable her to use her wings, and was only six and a half inches across at the orifice. However, she appeared each time with a young bird, sometimes in her bill, sometimes held between her breast and her bill, and once she let one fall from the mouth of the hole on to the heather below. The young bird was apparently none the worse. When the last duckling had been safely got down, she led them down the burn, never having noticed me as I sat huddled up behind some big stones on the other side of the water. It took considerably more than an hour to carry down all the little ones. The drake did not appear upon the scene.

Young in down are dark brown on the upper parts, shading into reddish brown on the head and sides of the neck. The under parts are white, as also are the lores, which are margined above and below with dark brown. There is a white patch on each wing, one on each side of the back, and one on each side of the rump.



GOOSANDER. *Mergus merganser.*

GREENFINCH

Fringilla chloris

THE Greenfinch is a common resident throughout the British Islands, and is one of the best known of all the British Finches, probably because of its fondness for the ornamental trees and shrubs in our gardens and parks, and round about our houses.

The Greenfinch is generally found about the large hedges, dividing the fields, in small plantations of ornamental trees, or in woods composed of spruce-firs, preferring the outskirts of the latter. In such localities it is common during the breeding-season, and being rather a shy, retiring bird at this time of year, tries to keep out of sight as much as possible, though its song may often be heard. In spring, when the males are in full song, their notes are soft and pleasing; but during the nesting-season they leave off their singing to a great extent, and only their call-note, a somewhat long-drawn '*zie-äze*,' is heard. The flight of the Greenfinch is undulating, the wings being almost closed during the dip in the flight, and they constantly utter a short note, '*yĭk-yĭk-yĭk*,' as they fly.

The food of the Greenfinch consists chiefly of grain and various seeds, but it is also made up of insects, grubs, etc.; and although the bird may be seen frequently in the fields of ripe grain, it is chiefly for the sake of the seeds of many of the grasses and weeds, which are ripe at the same time.

The Greenfinch is a rather late breeder, and eggs are seldom to be found before the end of April. The birds are very sociable during the breeding-season, and numbers of their nests are often placed in quite a small patch of ornamental trees. The Greenfinch's nest may be found in the larger hedges, in the fruit-trees in our gardens, in the patches of tall whins on waste land, or in plantations of young spruce-firs; but the favourite place is among the evergreen trees and bushes in our shrubberies. If the bird has any preference

for one particular kind of tree, it is the yew, and three or four nests may often be found in the same tree, cunningly hidden among the smaller twigs, generally where two or three form a sort of fork.

The nest is built of moss, dry grass, small roots and wool, generally with a few slender twigs woven in, and is lined with moss first, and finally with wool, feathers and hair, sometimes entirely with fine roots. Some nests are much more carefully made than others, but they are always exceedingly pretty, with the white, red-spotted eggs forming a contrast to the dark green of the surrounding foliage and the nest with its brownish lining. The nest is sometimes, though more rarely, found among the ivy or rose-trees trained up the sides of a house. The most beautiful nest I have ever seen was among a mass of Gloire-de-Dijon roses, close to a window. The bird was exceedingly tame, and would suffer herself to be stroked while on the nest.

The Greenfinch often begins to sit as soon as the first egg is laid, and becomes very anxious if any one should come too near the nest, flying about above the intruder's head, uttering her plaintive note, being joined almost at once by the male, who is never very far from the nest. The Greenfinch rears two broods in the year, as a rule, sometimes even a third. The young of the first broods may often be seen in small flocks in the grass fields in summer, as they are cast adrift by their parents as soon as they can fend for themselves.

Eggs of the Greenfinch are very easily confused with those of the Goldfinch and Linnet; indeed, it is impossible to distinguish between small eggs of the Greenfinch and large eggs of the two latter birds. They vary in number from four to six, and are pure white in ground-colour, sometimes slightly tinged with blue or faint green; they are spotted, blotched, or streaked with purplish brown, and underlying markings of pinkish brown. The markings are very frequently nearly all on the large end of the egg, and the underlying marks are generally pretty nearly the same in size and numbers as the surface ones. Some eggs are covered with dark, streaky markings, and others have hardly any spots at all. They vary in length from ·87 to ·70 inch, and in breadth from ·60 to ·53 inch.

PLATE I

GREENFINCH. *Fringilla chloris*

This nest was selected from some eighteen or twenty others found in one large laurel hedge near Doune, Perthshire, as an excellent type of the Greenfinch's nest, when it is near ploughed fields, being, under such conditions, frequently almost entirely made of root-fibres picked up by the birds. The outside of the nest was made of moss and coarse grass-roots, and it was lined with very fine root-fibres, beautifully interwoven with a little hair. The bird was very tame, and I almost succeeded in getting her into the plate on two occasions, as she hopped from twig to twig round the nest. In the same hedge, not far from the nest photographed, I found two nests on the same branch, and only twenty-two inches apart, the one being almost directly above the other. Both birds were sitting on five eggs when I found them.

GREENFINCH. *Fringilla chloris.*

2/5 NATURAL SIZE.

COMMON GULL

Larus canus

THE Common Gull is a resident in the British Islands. It breeds in various localities in Scotland and Ireland, both inland and on the coast, and is found breeding on the Hebrides, the Orkneys, and Shetlands. During the winter it wanders further south, and is a common visitor to the greater part of the English coasts, wandering far inland in mild open weather.

The Common Gull is more or less gregarious in its habits, and is usually seen in flocks, but single pairs may occasionally be met with, feeding by themselves. Some of its breeding colonies are very large, whilst others consist of only a few pairs, and in some localities single nests may be found at intervals along the coast. It breeds just as readily inland as on the coast, but seems to have a decided preference for rocks or stones on which to stand. When its colonies are very large, it chooses flat open ground. A colony in Morayshire was situated on a patch of bare sandy ground, covered with dead sticks of whin and broom. In Shetland I found a few pairs breeding on a low grassy island in company with many Richardson's Skuas. In many places it breeds in large numbers on the grassy ledges of cliffs, both on islands and on the mainland, and often nests on the little bunches of sea-pink growing among the rocks on the shore.

Its call-notes are loud and harsh, sometimes resembling the syllables '*keee-youk*,' or '*kyaah*,' perhaps more often a whistling '*keeeeaa*.' It has also a habit of calling like the Herring Gull, '*kee-ouk*, *kee-ouk*, *eyouk*, *youk*, *youk*, *ouk* generally when sitting on some rock or mound. It feeds both inland and on the sea, sometimes following the plough for worms and grubs, sometimes catching fish in the sea, or picking up refuse on the beach. It is especially

fond of frequenting harbours for the scraps of offal which it picks up, or meadows irrigated by sewage.

Nesting operations are commenced during the last half of May in this country, and fresh eggs may be found till well on in June, especially if the first nests be robbed of their contents. The nest is an untidy one, loosely constructed of dead grass, sea-campion, bits of sea-pink torn up by the roots, and a few large feathers, or straws, and is generally placed in some niche in the rocks, on some grassy ledge on the cliffs, or on swampy ground, sometimes among the heather on some moor. I have seen a nest placed on the top of a turf dyke in Shetland.

Three is the usual number of eggs laid. They are subject to a good deal of variation, though they do not go through such infinite varieties as those of the Black-headed Gull. The ground-colour may be any shade from pale buff to dark olive-brown, sometimes even rich dark brown; many specimens have pale pea-green ground-colour, varying to dark olive-green. The spots are seldom very large. Surface-markings are various shades of brown, sometimes very nearly black, and the underlying markings are sometimes brownish grey, and sometimes purplish grey, according to the nature of the ground-colour. The markings are generally most abundant on the large end of the egg, and take the form of irregular blotches. I have taken some specimens covered with curious irregular scrawlings all over the surface, and have one clutch which is very dark brown at the large end, tapering to a dirty white at the point of the egg; there are almost no markings on these specimens. The eggs vary in length from 2·40 to 2·12 inches, and in breadth from 1·75 to 1·58 inches.

Young in down are greyish buff mottled on the upper parts with very dark brown. Only one brood is reared in the year. The young in down can run with some speed when alarmed, but prefer to crouch down in some hollow, or beside some stone or tuft of grass, trusting to their protective colouring to escape notice. The old birds are very careful of their progeny, and will swoop down angrily at any one who ventures too near.

PLATE I

COMMON GULL. *Larus canus*

June 28th, 1897.—This nest was photographed on one of the small rocky islets lying off the island of St. Ninians, in the south of Shetland. The fisherman, who put me across, told me that they took the Gull's eggs for food, but allowed the birds to sit on the third laying. We saw several nests in similar places, and one well-grown young bird.

This group of little islands is a most fascinating place in the breeding-season, although there are no rarities. The grassy flower-clad tops of the islands are the home of the Lesser Black-backed and Herring Gulls; sometimes too a pair of Eiders have their nest among the long grass. On the steep rocky faces the Shags build their nests, and the holes among the boulders and débris at the base of these miniature cliffs are tenanted by the Black Guillemot and Puffin. Among the jagged rocks and small patches of sea-pink, the naturalist may find an Oyster-catcher's nest, or here and there a pair of Common Gulls, and in some of the little holes among the rich soil on the summit the Stormy Petrel builds. The grey colour of the rocks, covered here and there with red and yellow lichens, the bright green grass, the patches of pale pink of the sea-pink in bloom, with a background of deep blue sea, and white sea-birds screaming in the air, make up one of the most pleasing pictures one can well behold.

COMMON GULL. *Larus Canus.*

1/5 NATURAL SIZE.

CUCKOO

Cuculus canorus

THE Cuckoo is a regular summer visitor to most parts of the British Islands, including the Outer Hebrides and the Orkneys; to the Shetlands, however, it is only an occasional visitor.

From its peculiar notes, the Cuckoo is perhaps the best-known bird in the British Islands. It is a most widely distributed species, and there is hardly a single district, either on the coast or inland, where it is not seen during the summer. Its stay in our Islands is somewhat short. It generally arrives in England about the middle of April, and leaves our shores again in August and September. Curiously enough, the old birds go first and the young somewhat later, reversing the usual order of proceeding among migratory species. I have frequently flushed the young birds from the long heather on the moors in September, long after the old birds had departed for the south.

Its curious hawk-like flight is almost too well known to need description. Almost every one must have seen it flying from tree to tree, uttering its curious call, '*cuck-koo, cuck-koo,*'—sometimes as its flies, but perhaps most often as it sits on some fence-post, wall, or branch of a tree. When perched, the note is generally accompanied by a jerking and spreading of the tail. The males begin to call soon after they arrive, and their loud clear note may be heard from some way off. In early summer a curious choking sound, rather like a hoarse laugh, is often uttered after the usual call, which is sometimes lengthened into three notes,—either '*cuc-cuc-koo,*' or '*cuc-koo-koo.*' The cry of the female is a hoarse '*kwook-kwow-kwow-kwow,*' generally uttered when flying. Its short neck, long tail, and rapid flight gives it rather the appearance of a Sparrow Hawk on the wing. But the small birds are not the least afraid of it, and usually follow it about from place to place, mobbing it most un-

mercifully. The male bird usually selects some suitable haunt, from which it seldom strays far during the summer; it is rather a shy bird, and prefers to keep out of sight among the trees.

The food of the Cuckoo consists chiefly of beetles, moths, butterflies, caterpillars and other insects, the indigestible portions of which, such as the wing-covers of beetles and the hairs of caterpillars, are ejected from the mouth in the form of pellets.

The most interesting fact in the Cuckoo's history is that it does not rear it own young, but deposits its eggs on the ground, carrying them in its bill to the nests of other birds, where it leaves them to the care of the foster-parents. Some discrimination is exercised in the choice of a foster-parent; an insectivorous bird is nearly always chosen, and in Great Britain the Pied Wagtail and the Meadow-Pipit are the greatest favourites. Sometimes, owing to the scarcity of insectivorous birds in the district, the Cuckoo is compelled to deposit its egg in the nest of some Finch or Bunting: the young bird, however, seems to thrive just as well. The Cuckoo's egg is remarkably small in proportion to the size of the bird, and is usually placed, perhaps on purpose, in the nest of some small bird, so that the nestling monopolises the attention of the parent birds, and eventually ejects its foster brothers and sisters from the nest. In only one case have I heard of a young Cuckoo failing to destroy the entire brood. This came under my own notice. The Cuckoo was reared in a Robin's nest built in some thick ivy on a low wall; all the Robins were ejected from the nest six days after the young Cuckoo was hatched. One was still living, so I replaced him in the nest. On returning next morning I found only the young Cuckoo in the nest, but the Robin had taken up its position among the rootlets of the ivy beside the nest, from which position the Cuckoo was unable to dislodge it. Both birds eventually flew.

The eggs of the Cuckoo are subject to great variation in colouring. As a rule, they somewhat resemble those eggs amongst which they have been placed, but sometimes there is a marked difference, in which case it is probable that the bird has been unable to find a suitable nest in which to place her egg, and has had to be content with the first she came across. Five eggs are said to be laid in the season (Bidwell, *Zoologist*, 1883), at intervals of seven or eight days. The eggs of each bird probably vary but little in character and colouring. They vary in length from 1·04 to ·85 inch, and in breadth from ·75 to ·60 inch.

PLATE I

CUCKOO. *Cuculus canorus.*

May 17th, 1894.—While walking along the shore of the Lake of Monteith, Perthshire, one day, I saw a Cuckoo rise from the ground in front of me hotly pursued by a pair of Reed Buntings. On searching the spot, I found a nest of the latter species with a Cuckoo's egg in it.

The egg was pinkish buff in ground-colour, minutely speckled all over with brownish marks, and was evidently intended to have been deposited in a Tree Pipit's nest, as it was almost identical in colour with a clutch of eggs I took the same day not a quarter of a mile from this place. The Reed Buntings followed the Cuckoo for nearly half a mile, mobbing it, and did not return to the vicinity of the nest for nearly three-quarters of an hour, though the eggs were well incubated.

CUCKOO. *Cuculus canorus.* *Plate I.*

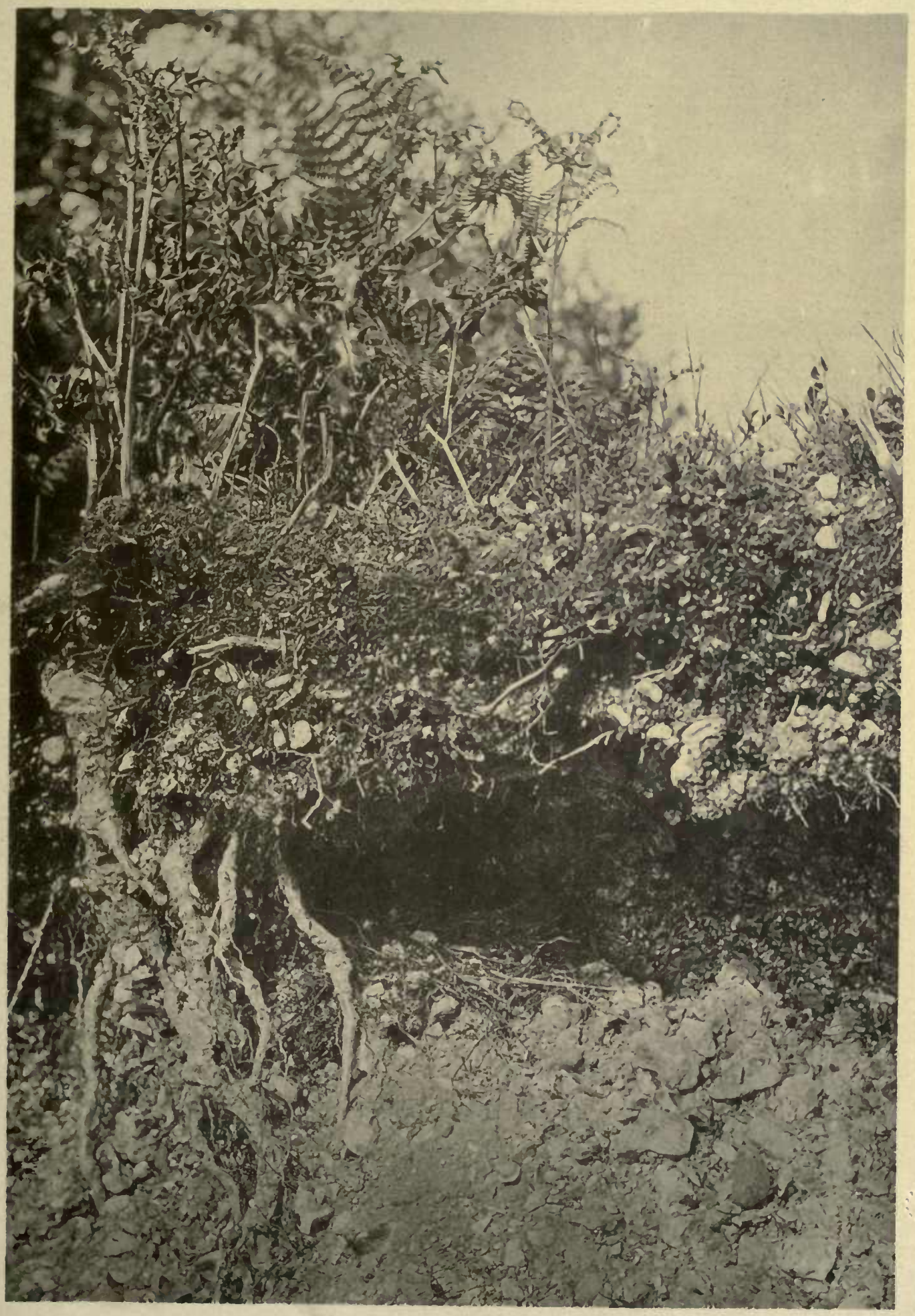
1/2 NATURAL SIZE.

PLATE II

CUCKOO. *Cuculus canorus*

June 18th, 1897.—This nest was shown me by a lad, who was working in the gravel-pit where the nest was placed. In this case the young bird was reared by a pair of Pied Wagtails. When I saw it, it was nearly full-fledged, and snapped its bill with a loud sound, not unlike '*kop*,' when I stooped to look at it. Owing to the intense glare of the bright sun, the nest is in deep shadow, but the white spots of the fan-like tail of the young Cuckoo may be seen.

The Wagtails flew around uneasily all the time I was at the nest, showing great anxiety; they each carried large juicy green caterpillars in their bills.



CUCKOO. *Cuculus canorus.* *Plate II.*

HEDGE-SPARROW

Accentor modularis

ONE of the most familiar of our smaller birds is the Hedge-Sparrow. It is a resident in our Islands, and is one of the most widely distributed of our native birds, being found in all districts throughout the British Islands, except in some of the barest and most desolate tracts of country. It is found on most of the Hebrides, and is a straggler to the Orkneys and Shetlands.

The favourite haunts of the Hedge-Sparrow are the gardens, shrubberies, hedges and plantations in well-cultivated districts. In winter it comes close to our houses, and is generally to be seen about the farmyard, hopping in and out of some heap of firewood, or stealing tiny scraps of the food put down for the hens. It attracts little attention as it hops about among the lower branches of the bushes, or shuffles along the bottom of some hedge, and seldom takes wing, if it can possibly escape notice by gliding under the foliage. Its flight is slow and jerky, and seldom is prolonged for any distance. It has a habit of jerking its wings as it hops about among the twigs. It is a bird of the bushes, and is seldom seen among the higher branches of trees.

Like the Robin, the Hedge-Sparrow sings intermittently throughout the whole year. On any bright sunny day in winter the little songster may be seen in some sheltered spot, perched on the topmost twig of some bush or hedge, pouring forth his plaintive little song. It is a sweet enough production, very short and attractive, reminding one somewhat of the Wren's song. The call-notes are low and penetrating, somewhat resembling the syllables '*creeee, cheeee.*' During winter the males may sometimes be seen chasing each other angrily through the bushes, and are at this season unusually clamorous. The Hedge-Sparrow is almost the last bird to go to roost, and his plaintive note

may be heard among the undergrowth long after the short winter day has drawn to a close.

The food of the Hedge-Sparrow is composed of worms, grubs, and insects, sometimes a few small seeds are eaten, particularly in hard weather, when it picks about in the stackyards near the farms.

It is rather an early breeder, sometimes commencing to build its nest in the first days of April. It is never very far from the ground, and is nearly always very carefully concealed. Perhaps the favourite site is in some thick hedge, where it is carefully protected by the sharp thorns all round; sometimes it is placed in a thicket of brambles, or in a thick ornamental shrub; a stack of pea-sticks, a heap of firewood, or an ivy-covered wall is sometimes chosen, and more rarely it is built in some mass of twigs growing out of some tree trunk. I once came across a nest of this species, containing five eggs, on the mossy bottom of a dried-up well, half-way up the Bass Rock.

The nest is a beautiful little structure; the outside is built chiefly of green moss strengthened with small twigs and a dead leaf or two; it is lined with a profusion of wool, hair, and a few feathers. From four to six eggs are laid. They are of a beautiful greenish blue colour, somewhat rough in texture and without markings of any kind; they are easily to be distinguished from those of the Redstart, which are somewhat lighter in colour and rather glossy. They vary in length from ·82 to ·74 inch, and in breadth from ·65 to ·55 inch. Two or three broods appear to be reared in the year, as fresh eggs are often found during the latter half of July. When driven from its nest the Hedge-Sparrow does not go far away, and may be seen hopping about among the twigs only a few feet distant.

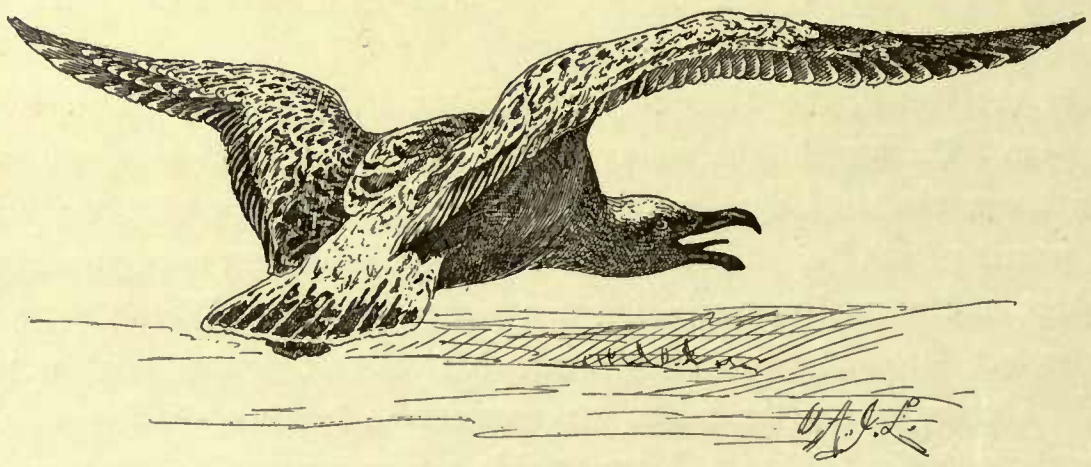
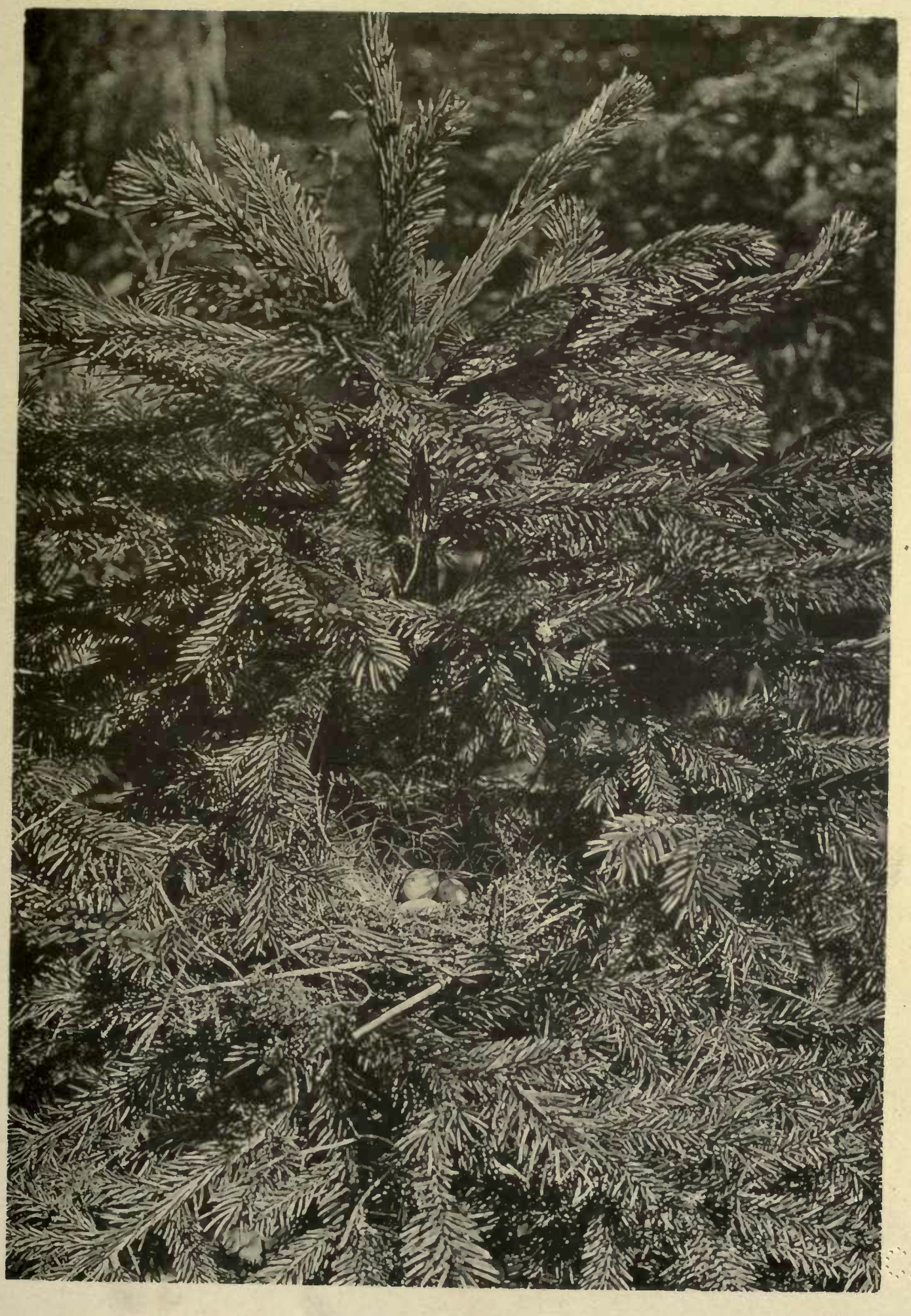


PLATE I

HEDGE-SPARROW. *Accentor modularis*

May 3rd, 1896.—The nest from which this Plate is taken was built in a small spruce, in a large wood in South Perthshire. In another small tree of the same species, not twenty yards off, I found a second nest, in which there were five eggs, all of which had been sucked by some animal, presumably a mouse.



HEDGE-SPARROW. *Accentor modularis.*

1/2 NATURAL SIZE.

HOODED CROW

Corvus cornix

IN Scotland the Hooded Crow is pretty widely distributed, and breeds in suitable localities, including the Orkneys and Shetlands. In England, however, it is chiefly known as a winter visitor, though a few pairs breed in various localities. In Ireland it is a common and widely distributed species.

The favourite haunts of the Hooded Crow are the moors, forests, and hill-farms, where it is alike detested by the gamekeeper and the shepherd on account of the depredation it commits. It preys on every creature which it can overpower, killing weakly lambs, young hares and rabbits, and destroying the eggs and young of all kinds of birds. On finding a nest it does not rest until it has appropriated the entire contents; even young birds are carried off to some quiet corner, where they are torn to pieces and devoured.

The food of the Hooded Crow is chiefly composed of carrion and animal flesh, but so voracious is his appetite, that nothing comes amiss to him. A dead sheep rarely lies on the hills for a few hours without having both the eyes gouged out. On the coast he feeds on the garbage cast up by the tide, dead fish and scraps of offal and shell-fish, especially mussels, which he carries up into the air and breaks by letting them fall upon the stones beneath. The newly ploughed fields are carefully searched for worms and grubs, and the stubble-fields, in autumn, for scattered grain. In the breeding-season his depredations are extensive; no nest is safe from him. He may be seen quartering on the ground watching for some Grouse's or Duck's nest, which he will entirely destroy. On the coast, piles of broken shells may be found on some patch of short grass, whither he carries them impaled on his powerful bill, to devour them at his leisure.

The cry of the Hooded Crow is a hoarse '*krāāā*,' often repeated two or three times in succession; sometimes a double note is heard like the syllables '*kurruck*.' Early in the year, during the pairing-season, he utters a variety of notes, often opening and closing his wings, spreading his tail, and performing other curious evolutions in the air.

It is a somewhat later breeder than its congeners, and seldom begins nest-building before the middle of April. It probably pairs for life. A variety of sites are chosen for the nest; sometimes it is in a tree, sometimes on a cliff, either by the sea or inland, and occasionally on the ground beside some stone on a steep heathery bank. The nest is composed of a bulky foundation of large sticks, twigs, dead heather stalks, old bones, reeds, turf, etc.—in fact, anything that comes handy, and is lined with a few feathers and much wool, rabbits' fur, and hair. Some nests, especially those on cliffs, are enormous structures, as the birds return to the same habitation year after year. The outside materials of the nest are usually whitened and bleached by the weather in such situations. The cup which is prepared for the reception of the eggs is beautifully soft and rather deep, and the nest generally swarms with vermin, especially when the young are hatched.

From four to five eggs are laid; they vary from pale green to bluish green in ground-colour, spotted, blotched, or streaked with olive-brown of different shades, and violet-grey underlying markings; some specimens have a few black hair-like scrawlings on the large end of the egg. On some eggs the markings are so numerous as to hide much of the ground-colour, on others they are very few, while on a few specimens the markings are so faint as to be almost invisible.

They vary in length from 1·84 to 1·50 inch, and in breadth from 1·38 to 1·05 inch. They are absolutely indistinguishable from those of the Carrion Crow.

PLATE I

HOODED CROW. *Corvus cornix*

April 25th, 1897.—The nest from which this Plate is taken was built among the topmost branches of a small Scotch fir; the tree was one of several, growing on the edge of the moor beside a large wood. I saw the Crow fly off, and climbed to the nest, expecting to find only one, or at the most two eggs, as in South Perthshire (where the nest was) the Hooded Crow rarely begins to lay before this date. I was agreeably surprised to find it contained five, so I set about taking a photo of it. Fortunately there was another somewhat taller tree growing quite close, and I succeeded in getting my camera fixed on a long branch, and after sitting perfectly still for some minutes, hardly daring to breathe till the swinging of the tree had stopped, I got a plate exposed.

Within a two-mile radius of this spot I found no less than nineteen nests of this destructive bird. I however succeeded in snaring twenty-three birds on their nests with fine wire nooses, and took eighty-three eggs,—rather a benefit to the game in the neighbourhood.

HOODED CROW. *Corvus cornix.*

1/5 NATURAL SIZE.

BLUE TIT

Parus cæruleus

THE Blue Tit is one of the most widely distributed residents in our Islands. It is found in almost every suitable locality throughout the length and breadth of the British Islands, including most of the adjacent islands; to the Orkneys and Shetlands, however, it is only a straggler.

The Blue Tit is a most engaging little creature; his grotesque antics and smart knowing look attract immediate attention; he is not the least shy, and may be watched from a few paces off as he clings to the end of some twig, pecking the large buds to pieces for the grub which is feeding on the heart. At first sight one would suppose that the Blue Tit did great damage to the fruit-trees in spring. But examine the buds he has dropped on the ground: each one has a hole bored in it by some small insect, and would never have arrived at maturity. He is a most restless, noisy little bird, and is continually calling to his companions as he searches the twigs for food. The Blue Tit visits in its wanderings almost every place where there are shrubs and trees; orchards, gardens, fir plantations, beech-woods, hedges and birch copses, are all carefully searched. About roosting-time they become very noisy, and generally choose some ivy or yew-tree in which to roost; in very cold weather they are fond of roosting in holes in haystacks, two or three birds sometimes huddling into the same hole for the sake of warmth.

The food of the Blue Tit is very varied. It will eat almost anything: all kinds of seeds and grain, fruit of various kinds, especially hard pears and apples; insects, grubs, and beetles of all kinds, are also greedily devoured, and a bone is quite a treat, judging by the numbers of Tits which this dainty collects. The call-notes of the Blue Tit are loud and penetrating,

generally rapidly repeated, and resemble sometimes the syllables '*dzoo-zee, dzoo-zee*,' and sometimes '*zeeka-zeeka, zee-zee*,' followed now and then by a churring note.

In the beginning of April Blue Tits may often be observed squeezing themselves into all sorts of holes and crannies in walls or trees, looking for a nesting-site; but the actual work of nest-building is seldom commenced before the beginning of May. The sites chosen are very varied, but a hole is indispensable; sometimes the hole chosen is in a tree, sometimes in a wall or roof of an outhouse, and there are numberless instances of sites such as pumps, tool-bags or post-boxes being chosen. The nest is a very loosely built structure, consisting of a mass of moss and dry grass, lined with an immense quantity of wool, hair, and feathers.

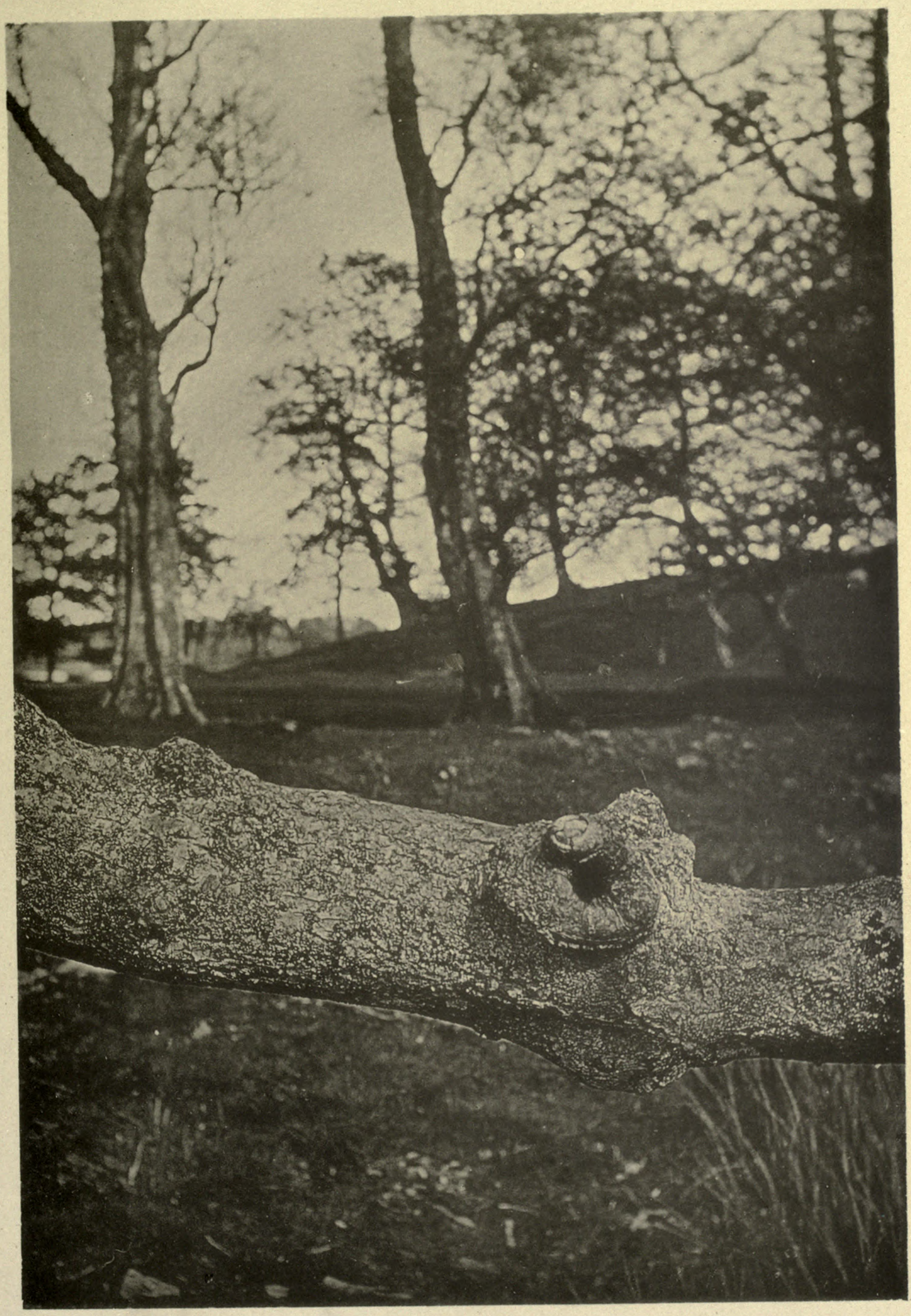
The eggs laid vary in number from five to nine, but nests are often found which contain as many as twelve eggs. I once found sixteen eggs in one nest, but they were very much mixed up in the lining, and four were addled, so I concluded that the latter had remained in the nest since the previous season. The eggs, like those of all the Tits, are white in ground-colour, rather faintly speckled with light red, sometimes evenly all over, and sometimes with a zone of spots round one end. They vary in length from ·7 to ·52 inch, and in breadth from ·5 to ·42 inch.

The little bird defends her home most bravely, erecting her crest, hissing violently, and pecking furiously at the hand of the ornithologist who is rash enough to put it into the hole. One curious site I cannot help mentioning came under my notice a year or two ago: two flower-pots, one within the other, were standing on a window-sill, when a Blue Tit took possession of them, building its nest in the space between the bottoms of the pots, obtaining access by the hole cut for drainage.

PLATE I

BLUE TIT. *Parus cæruleus*

April 29th, 1896.—In the horizontal ash branch depicted in the Plate a pair of Blue Tits were busily engaged in building their nest; I found no fewer than eight pairs of Tits nesting on this island on the Lake of Monteith, all in hollow branches. After photographing the branch I ate my lunch, sitting on a stone close by, and watched the little birds arriving with materials; they had evidently reached the stage of lining the nest, as I saw one of them arrive with a large unwieldy mass of sheep's wool. It first tried to push this into the hole, but finding this was impossible, it backed into the hole tail first in a most comical manner, and succeeded in dragging the wool in after it. Shortly after, the other bird arrived, and went into the hole with a small feather. On going close up to the branch I heard a tremendous scrambling going on down the hole, and much calling and chirping; no doubt the piece of wool took a good deal of arranging.



BLUE TIT. *Parus cœruleus.*

WHIMBREL

Numenius phæopus

IN Great Britain the Whimbrel is only known to breed in the Shetland group. During the seasons of migration, however, it is met with on all the British coasts.

The Whimbrel resembles a miniature Curlew, and in many of its habits it closely resembles its larger relative. It arrives on our shores about the first day of May, performing its migration at night. On migration they chiefly frequent low-lying coasts, and obtain their food on the mud-flats or salt marshes, and are often seen in the green fields near the coast. They are not nearly so shy and wary as the Curlew, and walk about on the flats with a slow sedate step, seldom running; when alarmed, they stand with their long necks stretched out looking around, before they hurriedly take to flight. On migration they fly at an immense height, and are only to be recognised by their peculiar cry. On the coast they seem to be very fond of washing themselves, and may often be seen splashing about in some little pool left by the tide.

The call-notes of the Whimbrel, once heard, can scarcely be forgotten; seven clear whistles are rapidly repeated one after the other, gradually dropping chromatically, '*kö-kö-kö-kö-kö-kö-kö*'; when at their nests the alarm-notes are '*krrr-looo*' or '*krrr-leee*,' somewhat like that of the Common Curlew, but in a somewhat higher key.

Its food consists of insects, worms, small land shells, and occasionally small berries; when feeding on the coast during migration, sand-worms, small crustaceans, and various marine animals form its chief means of support.

The favourite breeding-haunts of the Whimbrel are the moors which lie close to the sea. They generally arrive in Shetland early in May, and

nest-building is commenced soon after, eggs being laid towards the end of the month. The nest is rather deep, but scantily lined, and consists of a deepish hollow in the middle of some bunch of heath or grass lined with a few heather stalks and pieces of dry grass. The Whimbrel lays four eggs, rather like small eggs of the Curlew, but generally more handsomely marked. They are sometimes pale olive green in ground-colour, sometimes rich green, and sometimes pale brownish buff, blotched and spotted with reddish-brown or olive brown surface-markings, and underlying markings of greyish brown. Most of the larger blotches of colour are on the large end of the egg, but sometimes the spots are evenly distributed over the entire surface. A very handsome variety has the ground-colour pale clear green, richly blotched with reddish brown surface-marks and a few buffish underlying spots. They vary in length from 2·52 to 2·2 inch, and in breadth from 1·74 to 1·6 inch.

Young in down are pale buffish grey, mottled rather faintly with dark brown on the upper parts; only one brood is reared in the year. The male bird guards the nest most jealously, and rises screaming in the air to chase off any bird which comes within a radius of nearly a hundred yards of the nest. He will fearlessly chase off the Black-backed Gulls, buffeting them and driving them successfully from the vicinity of the nests; even the Skuas are unmercifully mobbed by this pugnacious little bird. When leaving the nest the female usually runs but a few yards before taking wing, so that the nests are not difficult to find.

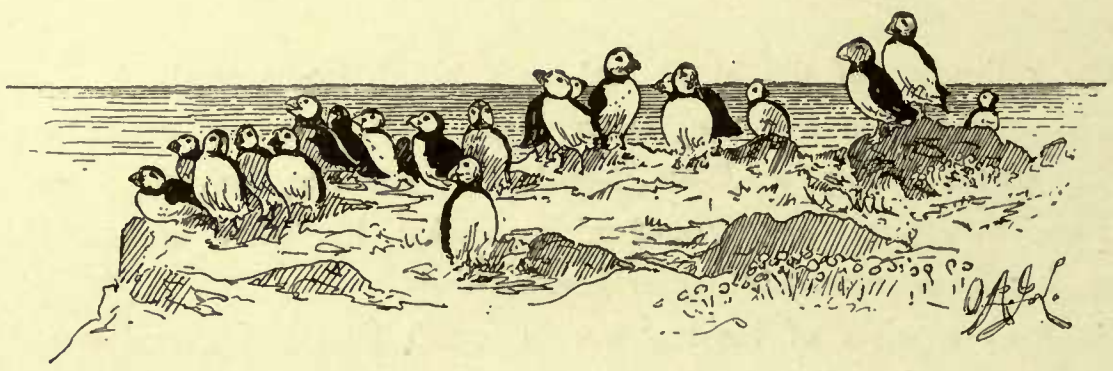
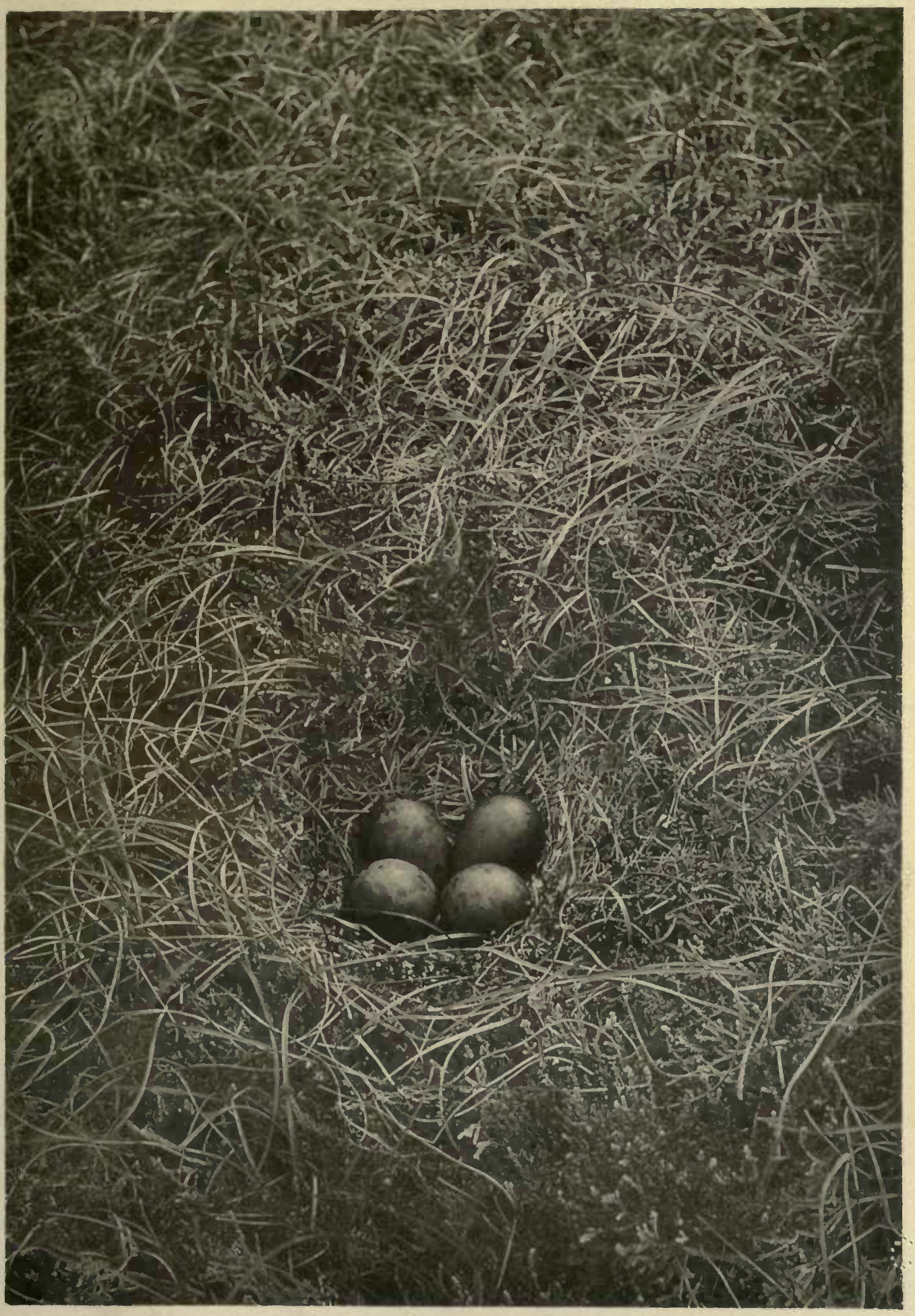


PLATE I

WHIMBREL. *Numenius phæopus.*

June 24th, 1897.—I photographed this nest on a low grassy island in Shetland, where the birds, thanks to most vigorous protection, still breed in comparative abundance. After taking some photographs, I lay down on a small knoll, and amused myself by watching the Whimbrels through my glasses. As they settled down again, the females ran straight to their nests without any attempt to conceal the locality, and I easily marked all the nests I cared to examine. The males were most jealous guardians of their homes: not a bird was allowed to fly past within a hundred yards without being driven off the premises; even the Black-backs flying lazily past were chased and driven to a safe distance; to the Eider Ducks, however, not the slightest attention was paid.



WHIMBREL. *Numenius phæopus.*

1/3 NATURAL SIZE.

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN. A. J. LEE

PART XI.

ROBIN.	1	PLATE.
WREN.	1	"
ROOK.	2	"
MARSH TIT.	1	"
GOLDEN EAGLE.	2	"
SPOTTED FLYCATCHER.	1	"
TEAL.	1	"
PHEASANT.	1	"

EDINBURGH. DAVID DOUGLAS.

O. A. J. LEE.

ROBIN

Erithacus rubecula

OF all our British birds, there is not one which is such a general favourite as the Robin: it is so trustful, so cheery, and so bold. Wherever there is a house, however lowly, the Robin is sure to be found; and from the universal protection which is given it by all, it is very widely distributed, and is a well-known bird throughout Great Britain and Ireland, wherever there is a sufficiency of cover to afford it shelter.

The haunts of the Robin vary slightly according to the season of the year. In the depths of winter it draws nearer to the habitations of man, often actually coming into the houses and picking up any tiny scraps of food it can find. In summer it is abundant in the most secluded parts of the woods and glens, where it retires to rear its young, though every homestead, orchard, and garden has its pair of these confiding little birds nesting in them. In the early autumn the Robin is not so often seen, as at that season it usually retires to the depths of the woods and plantations to perform its annual moult, returning anon with brighter plumage to cheer us with its presence through the long winter months.

Like the Hedge-Sparrow the Robin is a bird of the hedgerows, thickets, and undergrowth, frequenting the shelter of evergreens, heaps of hedge clippings, and stacks of pea-sticks. It seldom flies any distance, preferring to seek safety among the denser parts of the undergrowth through which it creeps and shuffles with amazing rapidity. Even when performing its yearly wanderings it rarely flies any great distance at a time, or rises to any height in the air. It is a restless little bird, and is almost constantly in motion, hopping out from under the evergreens to pounce upon some worm or insect, and hastening back to its shelter on the slightest suspicion of danger. When the gardener is digging up some bed of rich soil the Robin is sure to be there watching him, gliding

quickly to the newly turned soil, whenever a worm is exposed on the surface. On the lawn the Robin may be seen in the spring mornings hopping out from the bushes to look for small worms and slugs, stopping every now and then with drooping wings and elevated tail, to listen; again he utters a few sharp call-notes, '*tic-tic-tic*,' dropping little curtsies the while, and looks fearlessly at you with his dark, truthful eyes.

He is a most pugnacious bird, and lords it over the smaller birds in the neighbourhood, guarding his favourite haunts most jealously, ever ready to do battle with the intruder. He even fights most fiercely with his own species, and a battle-royal between two cock Robins is no uncommon sight. I remember, when a small boy, trying to catch some sparrows under a garden riddle, and as I was breathlessly watching from my ambush ready to jerk the string, a Robin hopped boldly underneath and began to pick up the crumbs of bread. Hardly had he begun his feast when another Robin darted down, and the two birds engaged in a fierce combat under the riddle. In the course of their struggles they knocked down the supporting stick and imprisoned themselves underneath. On going up to release them, I was surprised to find them still at it, fluttering about and pecking viciously at each other.

The food of the Robin is principally composed of small earth-worms, slugs, insects, and larvæ during the summer months. During the fruit season it feeds on wild fruits and berries, and sometimes takes a few of the currants and cherries from gardens. In the depths of winter, when its usual food is scarce, the Robin frequents the farmyards, piggeries, and poultry-runs for the scraps of food which it picks up there, and seems to know that it is a welcome guest.

Except during the autumn moult, the Robin sings incessantly throughout the year, and although its song is not a very musical production, it has a great charm about it, though it has a peculiarly sad tone. It is while singing that the wonderful tameness of this little bird strikes one most forcibly. It will sit within a few feet of the observer and pour forth its song, looking trustfully at him, as if it knew what a general favourite it is. The call-note is a sharp clear '*tic-tic-tic*,' uttered rapidly several times in succession, and always accompanied with quick bobbing curtsies. In the nesting-season it has a plaintive piping note when its nest or young are in danger, and sometimes at that season it may be heard to utter a long hissing note.

The Robin is supposed to pair for life, and is rather an early breeder. Its nest is placed in a variety of situations. Sometimes in holes in walls or trees, in the tufts of grass under hedgerows, banks, or in woods, and

often in ivy-covered walls or trees. It sometimes selects peculiar sites for building in, such as old tin boxes or cans lying half buried in the grass, in old tool-bags in the gardener's potting-shed, even inside a conservatory, where it goes in and out through a broken pane of glass. The nest is usually very bulky, and has one very marked peculiarity in its construction—the cup prepared to receive the eggs is at the extreme end of the hole in which the nest is built, and the front of the nest is large and very much extended. The nest is composed of a large foundation of withered leaves, moss, and dry grass, with a rather deep and beautifully rounded cup lined with hair, rootlets, and sometimes a little wool.

From five to eight eggs are laid, six being the usual clutch. They are pure white in ground-colour, spotted, streaked, and freckled with various shades of browns, reds, and a few greyish markings. Some specimens have the markings collected into a zone round the larger end of the eggs, others are nearly spotless white, while some are boldly blotched with rich dark reddish-brown with a few very dark brown streaks and spots. They fade considerably if kept for any length of time after being blown. They vary in length from ·9 to ·69 inch, and from ·65 to ·55 inch in breadth.

PLATE I

ROBIN. *Erithacus rubecula*

May 8th, 1897.—This nest was placed in a hollow beneath the young fronds of some large ferns growing on a steep bank beside a stream in South Perthshire. It was most beautifully built, and contained five fresh eggs.

I spoilt two plates trying to photograph the bird on the nest; she was quite tame enough to let me get my camera placed and focussed, but always flew hurriedly from the nest when she heard the click of my time-shutter. I tried an instantaneous exposure, but the light was not strong enough, as there were too many trees overhead.

ROBIN. *Erithacus rubecula.*

1/3 NATURAL SIZE.

WREN

Troglodytes parvulus

THE Wren is a common and widely distributed bird throughout the British Islands, and is to be met with on most of the Outer Hebrides and in the Orkneys and Shetlands; even in far-off St. Kilda the Wren is to be found, though the bird found there is recognised as a distinct sub-species by some writers on account of its paler colour, and the somewhat larger size of its bill and feet.

The Wren is one of the most familiar of our resident British birds, and may often be seen hopping in and out of the windows of houses, farmyard buildings, and stables, without the slightest sign of fear. It is a most restless little bird, and seems to be always exploring somewhere, never still for a moment, hopping and twisting in and out of the dense cover which it loves to frequent, every now and then pouring forth its quaint little song. It is rarely seen in the open, and always makes for the thickest part of the cover if alarmed, sometimes even seeking safety by squeezing itself into some tiny crevice in a dry stone dyke.

The Wren sings all the year round except during the early autumn, when its annual moult is in progress. Its song is remarkably strong and powerful compared with the size of the bird, and consists of a few short sharp notes followed by a melodious trill, the whole repeated over and over again in slightly different keys, and ceasing abruptly, sometimes in the middle of a phrase. Its call-notes are short, sharp, and grating, and rapidly repeated should it be alarmed.

The food of the Wren is largely composed of insects and their larvæ, ant's eggs, etc.; fruit is also eaten in its season, and in the depths of winter it joins the sparrows, chaffinches, and robins in searching for the crumbs and scraps of food thrown out, small seeds of various grasses and plants being also eaten occasionally in exceptionally hard weather.

The Wren is a solitary bird throughout the year, and is only observed in small parties when the young have just flown from the nest; at this season the young birds sometimes return to roost in the nest at night for the first few days after they have flown, but at other times they roost in ivy-covered walls and trees, dense evergreens, and in the holes in haystacks.

About the beginning of March the Wren selects a mate, but nest-building is rarely commenced until well on in April. The selection of a nesting-site is very varied. The nest, which is a marvellous production for the size of the tiny architect, may be found in the lonely forests of pines, in the hedgerows, in gardens, shrubberies, and plantations, even on the bare moors, wherever there is an overgrown tangle of bramble and bracken. A favourite site for the nest is in some patch of thick brushwood overgrown with dead bracken and choked with dead leaves. Sometimes it may be found jammed into some corner in an outhouse, and I have seen it built in a deserted Swallow's nest in a stone passage inside a house, the birds going in and out through the broken fanlight over the door. The materials of which the nest is made vary according to the surroundings, some being built entirely of green moss, others of dry grass, while some are made of the dead fronds of bracken. The nest is domed, the hole which admits the birds being in the side, but rather nearer the top than the bottom of the nest; round this orifice are woven little pieces of fir sticks, or tiny straws, which greatly strengthen the structure. The inside is lined with a felting of fine moss, feathers, and hair, though sometimes moss only is used. The safety of the nest is usually dependent on the materials used in the construction of the outside, which is made to harmonise as much as possible with the surroundings. The nest, which sometimes takes more than a fortnight to complete, is entirely built by the female, while the male usually carries to her the greater part of the materials. Numbers of unoccupied nests, built by these little birds, are frequently observed, though for what purpose they are meant is as yet a mystery to most ornithologists. Probably they are used as roosting-places in localities where other suitable shelter is not obtainable.

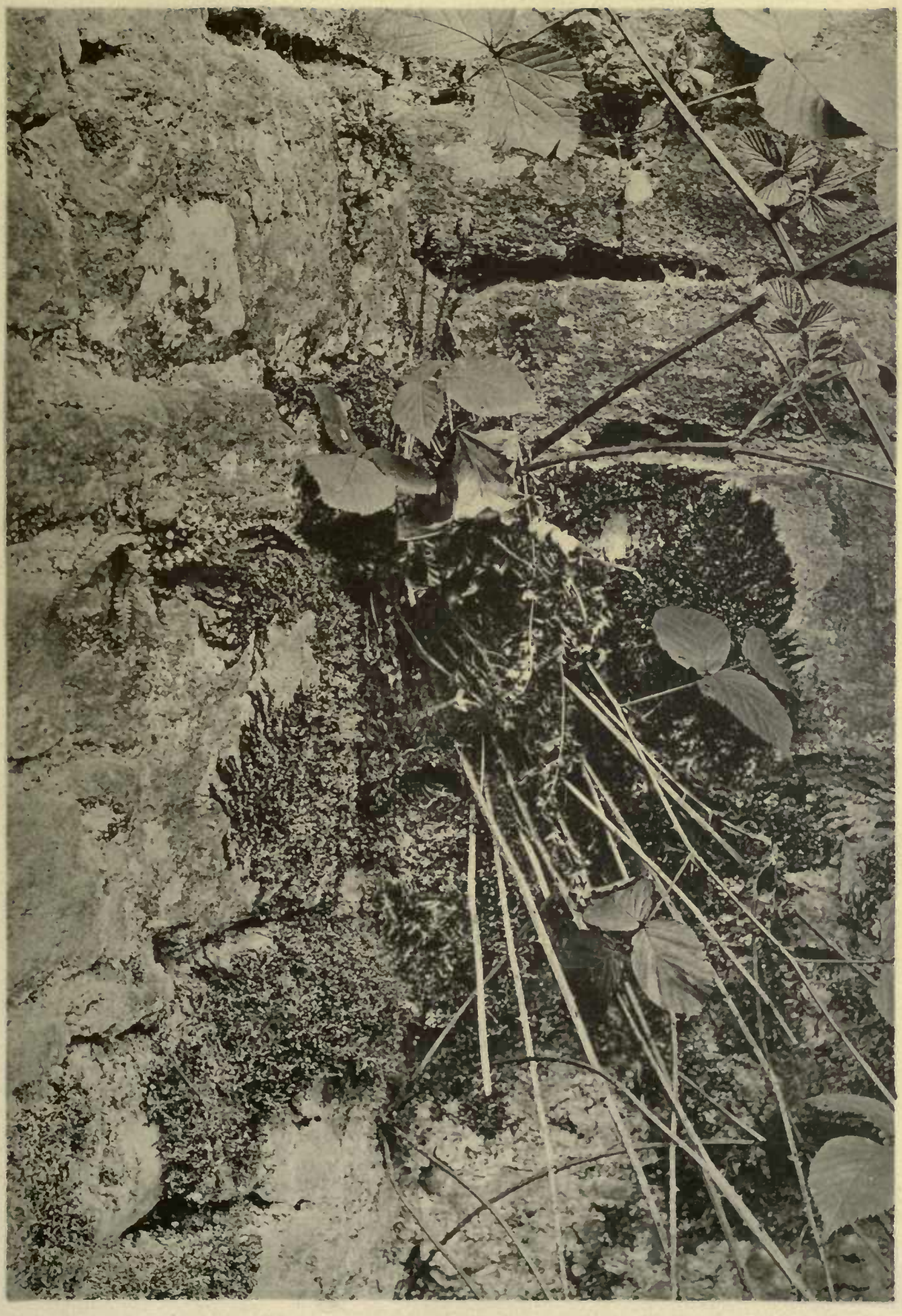
From four to six eggs are laid, though occasionally as many as eight or nine may be found. They are pure white in ground-colour, very sparingly marked with small red spots, which are sometimes collected in a zone round the larger end of the egg, and sometimes evenly distributed over the surface; some specimens are entirely without markings. They are subject to considerable variations in shape, some being much elongated, while others are short and round. They vary in length from ·74 to ·62 inch, and in breadth from ·55 to ·46 inch.

PLATE I

WREN. *Troglodytes parvulus*

May 7th, 1897.—Island of Inch Talla, Lake of Monteith. I had some difficulty in finding this nest, as it was so well concealed. It was built under a small clump of fern and bramble, growing out of the corner of a ruined piece of masonry, and I disturbed the Wren by kicking a spray of the bramble while setting up my camera to photograph a Blackbird's nest in a hole in the wall just above it.

Although I saw the Wren fly out, I took a minute or two to discover the nest, so beautifully was it concealed. I was focussing my camera on it when the Wren flew back and quietly entered the nest again, although I was standing within five feet of it. It contained five eggs.



WREN. *Troglodytes parvulus.*

1/5 NATURAL SIZE.

ROOK

Corvus frugilegus

THE Rook is perhaps the best-known of all our British birds, partly on account of its numbers, and partly because of its fondness for establishing its colonies in the immediate vicinity of houses and villages. It abounds everywhere, throughout the British Islands, where cultivation has spread, and visits the outlying islands, such as Skye, the Outer Hebrides, and the Orkneys and Shetlands, on some of which it occasionally breeds.

The favourite haunts of the Rook are the well-cultivated districts, interspersed with plantations and large trees, parks and pleasure-grounds seeming to have a very strong attraction for them. In some of our towns colonies of Rooks have been totally surrounded by buildings, and they rear their young quite unconcernedly amid the roar of the traffic, so strong is their attachment to their old nesting-quarters. The Rook is strictly a gregarious bird in all its habits, whether during the nesting-season or the rearing of their young, or during the summer and autumn, when they move about often in enormous numbers. These gatherings very often embrace the inhabitants of several colonies, the whole flock travelling, feeding, and roosting together. Towards the end of winter they break up during the day, and visit their respective nesting-quarters, returning at night to rejoin the other colonies at the common roosting-ground.

The note of the Rook is a loud harsh '*kraw, kraw*,' or '*krah, krah*,' but many modulations of their cry may be heard towards evening, when they are gathering at their roosting-quarters.

Its food is very varied: it visits the pasture-lands in the early morning to feed on the snails, grubs, and worms which abound there; in sowing-time it searches the cornfields for wire-worms and grubs of all kinds, taking its

toll of scattered grain; and in winter it frequents the potato-fields, and turnips are often destroyed during frost by the holes which it bores in these roots with its powerful bill. When the stubble fields are being ploughed up large gatherings of Rooks are seen following the plough, and eagerly devouring the worms and grubs as they are turned up. Like most of the Crows, Rooks are almost omnivorous: carrion is greedily devoured by them; they are fond of acorns, and may be seen pulling them from the oak-trees in autumn; beech-nuts and various berries are also taken at that season.

In Scotland, where the cultivated parts of the country are not so extensive as in England, the Rook is an inveterate egg-stealer, and I have known them destroy the entire contents of a Mallard's nest in a few hours. In some districts they may be seen regularly quartering the fields in search of Lapwings' nests.

Towards the end of February the Rooks begin to repair their nests, remaining longer and longer at the rookery each day; but until the eggs are laid they do not roost there. The building of the nest takes some time; one of the birds usually remains at the nest while the other is away in search of materials, as Rooks will steal from each other's nests, and seem to be very quarrelsome during the building-season. By the first week in March they are hard at work, and may be seen tugging and struggling with the twigs, breaking off little pieces, which they carry to their nests, spending some time in arranging them to their satisfaction.

The foundation of the nest is composed of sticks of various sizes, from slender twigs to heavy pieces of branches, fully three-quarters of an inch in diameter, often thickly cemented together with clay and mud, and lined with lumps of turf, plants torn up by the roots, moss, dry grass, leaves and feathers. The cup which contains the eggs is rather deep, though the nest is often outwardly rather flat. Some nests are enormous structures, being added to year after year, till they become at length solid masses of sticks and turf, from which the grass may often be seen sprouting luxuriantly. Many of the nests in a rookery are built touching one another, and are usually situated among the slender branches in the extreme top of some lofty tree.

During the second week in April the feeble cries of the young Rooks begin to be heard, and from early morning till sunset the old birds are taxed to the utmost to provide them with food; after a few weeks of this the young birds appear on the branches round the nests, and fly unsteadily from branch to branch, cawing lustily.

The Rook lays from three to six eggs; they differ very considerably in

shape, size, and colour, even in the same clutch. Some have the ground-colour a rich green, on others it is a pale blue, almost white, while a few have a pale buff tint. The surface-markings are greenish-brown of varying intensity, sometimes varied by a few almost black spots or scrawls, and many specimens have pale violet-grey underlying markings. On some eggs the markings are collected at one end; on others they are so numerous as to entirely conceal the ground-colour, and are evenly distributed over the entire surface of the shell. They vary in length from 1·85 to 1·55 inch, and in breadth from 1·20 to 1·0 inch. Very small eggs are frequently found; these are sometimes not much larger than Robins' eggs.

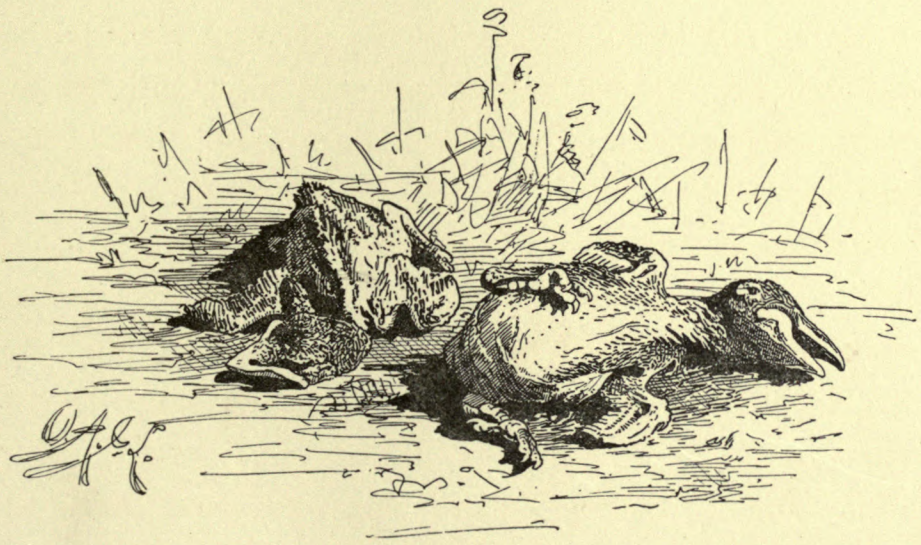


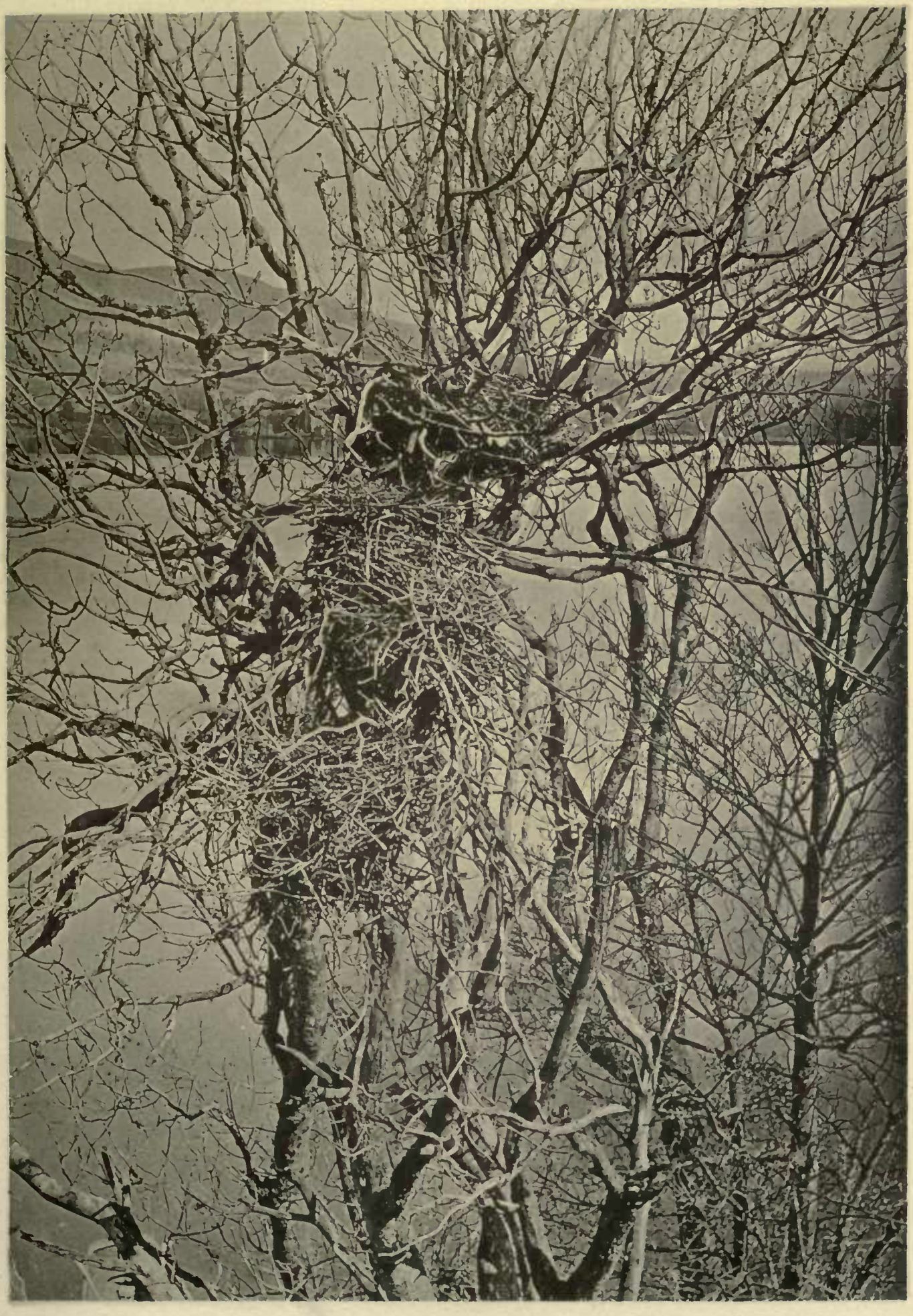
PLATE I

ROOK. *Corvus frugilegus*

April 20th, 1897.—The nests in the Plate were built in an ash-tree, on the point of Arn-Māk, at the Lake of Monteith. Just beside the ash-tree was a tall Scotch fir, the top of which was a solid mass of old Rooks' nests covered with a fine crop of grass. On the top of this platform I set up my camera on its legs, each leg resting in a nest, and took my photographs quite easily.

Through the branches of the tree may be seen the Lake Hotel and the Church and Manse on the far side of the lake, and in the bottom left-hand corner appears the stern of my boat drawn up on the shore.

I took the contents of the four nests in the Plate on three different occasions and was surprised at the different character of the eggs at each successive laying. The first time I took the eggs they were all bluish green in ground-colour, thickly spotted and blotched with greenish brown; the second laying was pale bluish white in ground-colour with very few markings, which partook mostly of the character of streaks; most of the eggs in the third laying were nearly white in ground-colour, with pale grey underlying markings and a few faint specks of dark brown.



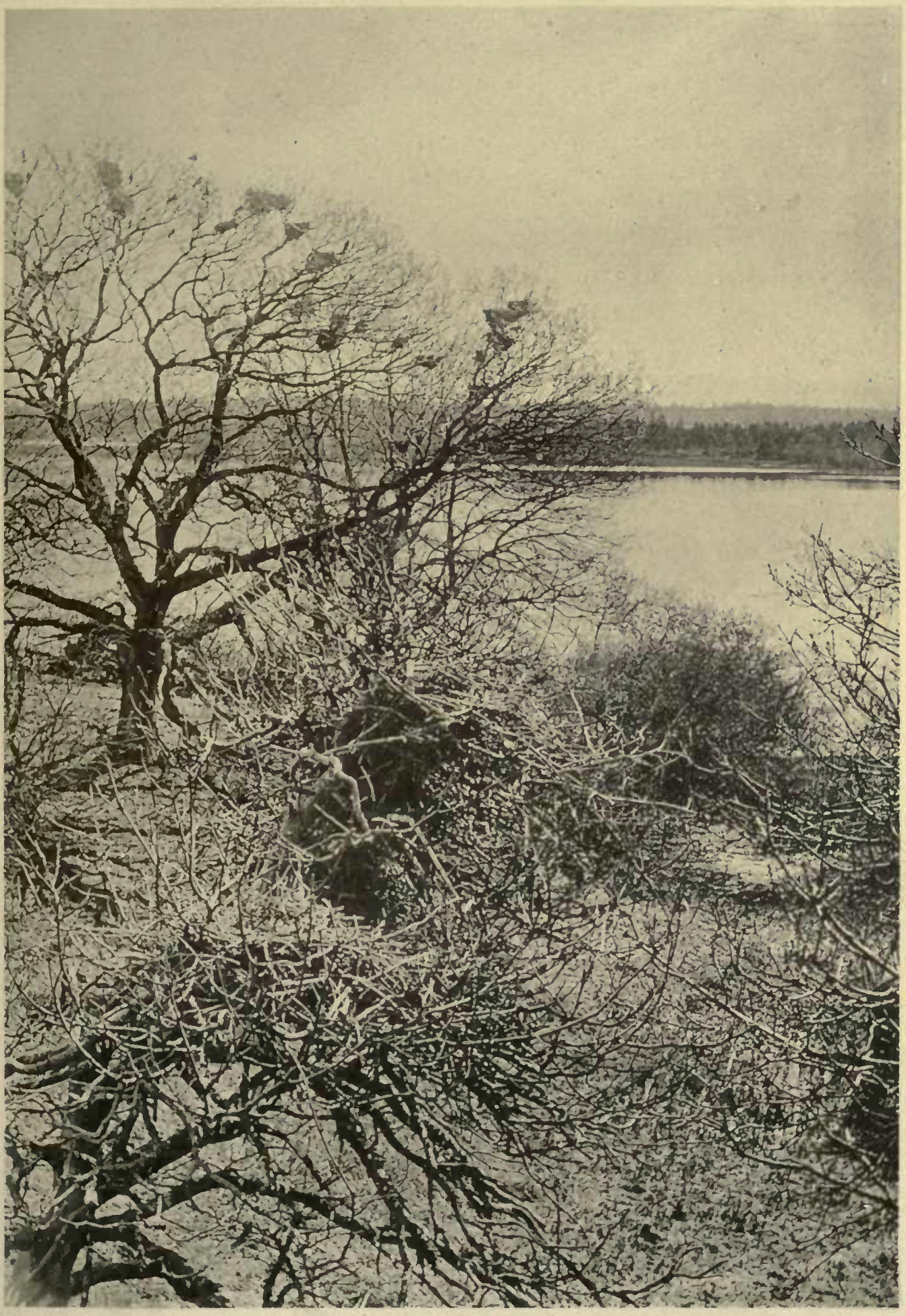
ROOK. *Corvus frugilegus.* *Plate I.*

PLATE II

ROOK. *Corvus frugilegus*

April 20th, 1897.—Lake of Monteith. This Plate was taken from the top of the same tree as Plate I. but looking in a different direction. The nests in the large oak-tree were quite inaccessible, as none of the branches would bear any one's weight.

Nearly all the nests I visited contained half-fledged young birds, except in a few of the easier trees, where the nests had no doubt been robbed two or three times already.



ROOK. *Corvus frugilegus.*

MARSH TITMOUSE

Parus palustris

IN most parts of the British Islands where the Marsh Tit occurs it is a resident; though during the autumn months it wanders about considerably, appearing in some numbers in one locality for a few weeks, and as suddenly disappearing again. It seems to be pretty generally distributed throughout our Islands, and is recorded as breeding in most districts.

From its name one would suppose that the Marsh Tit would be found among the reeds and sedges which are the chief features of marshes. Its habitat, however, is among the trees and bushes round sheets of water, on the banks of rivers and burns, in well-cultivated districts and in gardens and plantations. It is not so often found in very dry districts as other members of its genus, and, owing to its unobtrusive habits, has perhaps been frequently overlooked, or confused with others of the Tit family.

It is generally seen in company with Blue Tits or Coal Tits, and scarcely differs in its habits from these birds. It is quite as active as any of them, and twists itself into almost every conceivable attitude as it searches for insects on the buds of the trees. Sometimes it hovers at the end of a branch with whirring wings, or hangs upside down from a twig by one leg; at other times it may be seen creeping up the rough bark of some tree, reminding one rather of the action of a creeper. It is chiefly insectivorous in its diet, but is fond of fruits of all kinds and seeds, and, like most other Tits, is at once attracted to any bone, lump of fat, or piece of meat which is put out in the garden in winter.

The Marsh Tit is rather a silent bird compared with the Coal Tit and Blue Tit, but its loud plaintive notes, '*tay*, *tay*, *tay*, *tay*,' may be frequently heard as it flies from tree to tree in some wood calling to its mate. In

spring it has a loud call which may be represented by the syllables '*tee-tay, tee-tay,*' and sometimes a low plaintive '*weee, weee*' is uttered. Its song is a very poor one, consisting only of a few sibilant notes, '*sis-sis-sis-sis, seee,*' which it utters at intervals as it flits about from twig to twig. Like most of the Tits, it is a very sociable bird, and in winter, when food is scarce, it joins company with Blue Tits, Coal Tits, and Goldcrests, forming quite a flock, which searches the woods for supplies of food.

The Marsh Tit is not a very early breeder, as nest-building does not commence before the end of April, the eggs being seldom laid before the beginning of May. The nest is usually built in a hole in some tree or decaying fence-post, and is rarely at any great height from the ground. The entrance-hole is usually very small, and as a rule it is very difficult to obtain the eggs without cutting out the nest. Sometimes the nest is placed in some hole in the ground at the base of a tree, and I have seen it in a wall, and in the iron straining-post of a wire fence. If the nesting-chamber be large, the bottom of it is fitted up with a collection of small bits of wood, twigs, etc., and the nest, which is fairly neatly constructed, is built of moss and lined with a profusion of wool, hair, and fur; only once have I seen a lining of fine soft grass. This nest was built in the cleft of a large oak-tree which had been split by some winter gale; the entrance to the nest was a long crack only half an inch wide at the largest part.

The eggs laid vary in number from six to nine; occasionally larger clutches are said to be found. They are creamy white in ground-colour, spotted and freckled with pale red. The markings are usually most abundant on the larger end of the egg, though on some specimens they are very small, and evenly distributed over the entire surface of the shell. The markings vary in size in different clutches, some being large and pale in colour, while others are small and dark; on some specimens a few short streaks of very dark brown are seen. They vary in length from ·65 to ·6 inch, and in breadth from ·50 to ·45 inch. It is quite impossible to distinguish them from those of the Blue and Coal Tits, and they must be thoroughly identified by watching the birds to the nest. Two broods are occasionally reared in the year, the young of the first brood collecting into a little party and leading a wandering life till the autumn, when they join some flock of their species for the winter.

PLATE I

MARSH TITMOUSE. *Parus palustris.*

May 30th, 1896.—This nest was built in a hole in the end post of an old fence in Rothiemurchus Forest, Strathspey. I was looking for the nest of the Crested Tit when I heard the well-known cry of the Marsh Tit. I followed the bird for some distance through the wood, and was rewarded by seeing it enter the hole at the top of the post; on going up I found that the nest was eight or nine inches from the mouth of the hole, and right in the middle of the rotten post. There were seven young birds in it, apparently about a week old. The old birds were very shy, and did not come near the nest while I was there, though I heard their plaintive note now and then among the tops of the fir-trees.

I found another nest the same day in the dead branch of an alder-tree; it was fully twenty feet from the ground and quite inaccessible, as it overhung a swampy piece of ground, and would not have carried any weight. I heard the young birds chirping in the hole quite distinctly, and watched the old birds going in and out through my glasses. They seemed to be feeding the young birds on some kind of small white grub, possibly ant's eggs.

MARSH TITMOUSE. *Parus palustris.*

GOLDEN EAGLE

Aquila chrysaëtus

ALTHOUGH the Golden Eagle used to breed in a few favoured localities in England and Wales, its only breeding-places in our Islands at the present day are among the wilds of the western and northern counties of Scotland, in the Hebrides, and in some of the wildest parts of Ireland, though it is fast decreasing in the latter country.

The home of the Golden Eagle is among the vast and dreary solitudes of the Highlands, where on every side rise snow-clad mountains, their summits shrouded in mist. Amid the wild glens, stupendous grey rocks, and vast slopes of heather and huge boulders, where the hoarse croaks of the Raven or the roar of the mountain torrent alone breaks the silence, the Eagle has his home. Here are his hunting-grounds, and to those wild fastnesses must one go to see the king of birds in all his glory. He is not always to be seen in any particular glen, except during the breeding-season, for he is a wanderer, and covers vast tracts of country in search of his prey. Sometimes in the course of his wanderings he visits the Lowland counties, and may be seen sailing majestically over the Border hills.

The appearance of this regal bird as he soars on outstretched wings is indeed magnificent. Watch him as he slowly flaps out from some lonely pinnacle of rock with his broad wings glistening in the sun, now soaring with them fully expanded, gliding majestically round and round in wide sweeping circles, the tips of the primaries separated like fingers and turned up slightly, his tail turning from side to side like the rudder of some ship. Slowly he rises, with hardly any perceptible motion of his wings, till he floats high in the heavens, a mere speck against the blue.

The food of the Golden Eagle is somewhat varied: its principal food

consists of the blue hares and ptarmigan which live among the mountains, but when these are scarce he is quite ready to carry off a lamb or two; among the deer forests he will sometimes carry off a weakly calf, but this is not a very frequent occurrence, grouse, ptarmigan, blackgame, and rabbits forming his usual fare. If hard pressed for food the Golden Eagle will not hesitate to eat carrion, and I have seen a bird so gorged with feasting on a dead sheep that it had hardly strength to rise from the ground. After a feast of this kind the Eagle usually retires to some lonely crag,—his favourite perch for years; there he will sit for hours basking in the sun as he digests his meal. The bird is capable of great endurance, and will remain for a considerable length of time without food; a tame Eagle I once reared refused all food for nearly twelve days, and was apparently as strong as ever. This bird was excessively fond of bathing itself, and used to sit on its perch in the rain stretching out its wings and shaking its plumage in evident enjoyment.

The Golden Eagle is supposed to pair for life, and breeds in the same district year after year. The same nest is not used every season, especially if the birds are disturbed at their nesting-place; they usually have two or three favourite situations which they use in succession. They begin to prepare their eyrie very early in the spring, repairing the damage done to the nest by the storms of winter, and adding a new lining to it. An inland situation is generally chosen, always in a commanding spot, with an uninterrupted view of the surrounding country. The nest is usually built on a rugged cliff, partly precipitous and partly broken up by grassy ledges, on one of which it is sure to be placed, sheltered generally by overhanging rocks. As a rule the nest is built of sticks and heather, and lined with grass, moss, tufts of ferns, and large pieces of green herbage. In some cases the nest is large and bulky, while in others it is merely a hollow in the grassy ledge lined with grass and tufts of freshly plucked plants of various kinds. The eggs of the Golden Eagle vary in number from one to three, though two is the usual clutch. They are laid early in April, often while the snow is still lying thickly on the hill-tops, and are deposited at intervals of a few days, the female commencing to sit as soon as the first is laid. The eggs are dull white in ground-colour, with rich reddish-brown surface-spots and blotches, and underlying markings of lilac grey. Some specimens are finely dusted all over with pale reddish brown, others are richly and heavily marked with deep brown blotches and streaks, while others are pure and spotless white. One egg in the clutch is usually much more heavily marked than

its fellow, and in cases where three eggs are found one of them is almost certain to be addled. They vary from 3·15 to 2·72 inches in length, and from 2·5 to 2·2 inches in breadth.

The eggs are hatched by the end of April or the first week in May, the young being covered with snowy white down. If the eyrie be visited after the young have been hatched for any time, the whole nest will be found littered with fur, feathers, and bones, and generally one or two neatly plucked carcasses of grouse, white hares, or ptarmigan, for the young to feed on. The female sits very closely, and should she be shot or trapped, the male will undertake the rearing of the young himself.

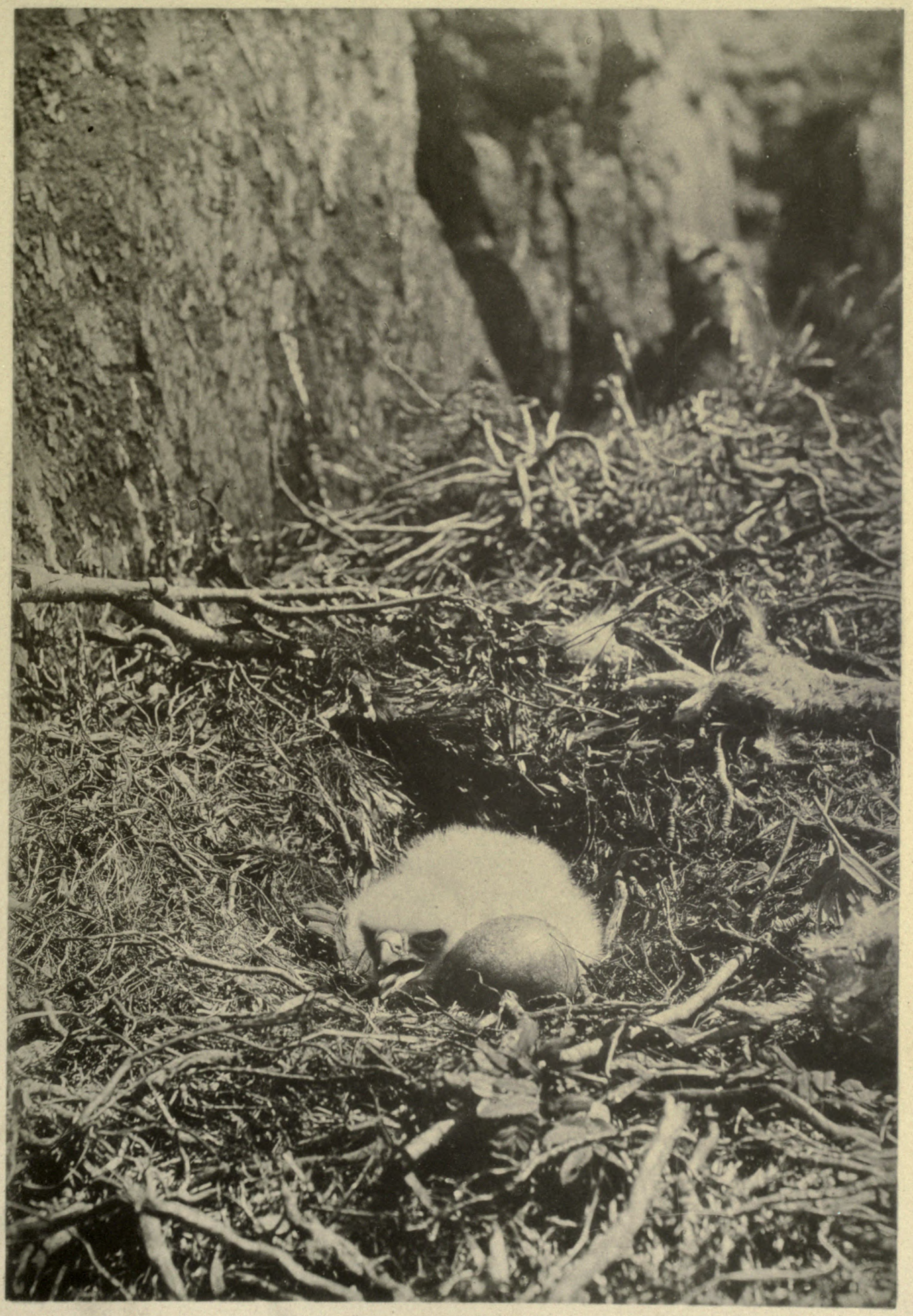
In a few instances the nest of the Golden Eagle is built in a tree, but this is usually the case where rocks are scarce. I have noticed, in connection with the eyries of this bird, that in very few instances is the nest inaccessible; it is generally quite easily reached without the aid of a rope — a marked contrast to the eyries of the Sea Eagle and Peregrine, which are usually in the most precipitous part of some stupendous cliff.

PLATE I

GOLDEN EAGLE. *Aquila chrysaëtus*

May 20th, 1896.—This Plate was taken from an Eagle's eyrie at Lochbuie, Isle of Mull. The nest was easily accessible, being placed beside a small rowan-bush on a grassy ledge on a precipitous face of rock some forty feet high. It was a bulky structure of heather torn up by the roots and bits of turf, and was lined with a quantity of freshly plucked briar leaves and twigs of rowan. The nest contained a young bird covered with white down and an addled egg; in and around it were remains of grouse and white hare, and on the edge beside the young bird lay two grouse, plucked quite clean, pieces of two white hares, half a leveret, and a stoat!—the latter with all the fur stripped off it except its tail, with the unmistakable black tip.

The old bird left the nest when we were within twenty yards of her and flew right away; she did not come back all the time we were at the nest, though we saw her soaring round and round, in the distance, a mere speck in the sky. The young bird was very timid, and did not show fight at all; even when I took it in my hand it only uttered a faint squealing noise, and crouched with its beak open while I photographed it.



GOLDEN EAGLE. *Aquila chrysaëtus.*

Plate I.

2/5 NATURAL SIZE.

PLATE II

GOLDEN EAGLE. *Aquila chrysaëtus*

June 16th, 1896.—Eagle's nest at Lochbuie, Mull. I returned to the eyrie after four weeks' absence, and found the Eaglet had grown considerably. The nest was filled with rowan leaves and a large fresh branch of beech leaves, and the larder consisted of one large blue hare, remains of two leverets, two grouse beautifully plucked and cleaned, and one young thrush. The Eaglet was quite pugnacious, and snapped his bill and pecked at me.

I carried the Eaglet home with me after photographing it. It weighed 7½ lbs. I had great difficulty in rearing it until it was fully fledged, for as long as it was in the downy stage it refused all food, and I had to cram a certain amount down its throat daily. Once it got its feathers it became quite reasonable, and would eat its food readily. I kept it for nearly a year, and it grew very tame and was a most amusing pet, though a trifle unmanageable at times, especially when it took to striking at one with its sharp talons. At the time of writing I believe it is comfortably housed at Blairgowrie, as I had to give it away on my return to town.

GOLDEN EAGLE. *Aquila chrysaëtus.* *Plate II.*

SPOTTED FLYCATCHER

Muscicapa grisola

ONE of the last to arrive of our summer migrants is the Spotted Flycatcher. It seldom makes its appearance in the British Islands before the first or second week in May, when the trees are in leaf and there is plenty of insect food for it. From May to September it is a common enough bird throughout Great Britain, though in the north of Scotland it is very local in its distribution, and only known as a straggler to the Orkneys and Shetlands. In Ireland it is also very locally distributed, though not an uncommon bird in some districts.

The Spotted Flycatcher haunts the edges of woods, plantations, and parks studded with trees, and is to be found in most well-cultivated districts; it is especially fond of gardens, orchards, and pleasure-grounds, and may often be seen perched on the long drooping branches overhanging some sheet of ornamental water, every now and then sallying forth to catch the passing insects. Like the Tree Pipit, the Spotted Flycatcher very often has a favourite perch, on which it may be seen throughout the summer, and as a rule its mate is not far off. Some iron fence, gate-post, haystack, or bare branch of a tree is usually chosen, where the bird sits motionless, watching the insects hovering round, every now and then darting forth into the swarm of gnats and fluttering in the air, while it catches them with loud snaps of its bill, anon returning to sit motionless again on its perch. In the dusk of the evening the Spotted Flycatcher may often be seen pursuing the small moths and beetles which hum lazily along. The bird rarely flies for any distance, though every now and then it chases some large butterfly, when its peculiarly hesitating flight is seen to perfection. Its food is chiefly composed of flies and gnats, varied with an occasional beetle or spider; moths and butterflies are also eaten. It is said that the Spotted Flycatcher will also eat berries during the autumn, but I have never been fortunate enough to verify this, though I have dissected many of them.

The song of the Spotted Flycatcher is but rarely heard, as it is uttered

in so low a tone as to be almost inaudible even a few yards away. Sometimes the bird sings while fluttering in the air after insects, sometimes while sitting on its perch; it rather reminds one of the song of the Whinchat, and is merely a few low rambling notes. The call-note is a monotonous '*zt-chick*,' uttered rapidly two or three times as the bird sits on its perch, every now and then jerking its tail gracefully backwards and forwards.

The Spotted Flycatcher does not remain very long in our Islands, and usually departs for its winter-quarters before the middle of September. Although it is able to fly rapidly, it seems very rarely to make use of its powers, as its usual mode of progression is by short undulating flights from tree to tree; and once it has taken up its quarters for the summer it rarely strays far from its favourite perch, and may nearly always be seen during the season at some particular spot.

The breeding-haunts of the Spotted Flycatcher are woods, plantations, orchards, gardens, and shrubberies, where there is a good supply of insect food. Nest-building is seldom begun before the latter half of May, often not till June. The site chosen for the nest is very varied, sometimes it is among the creepers on the walls of a house, sometimes in crevices in the rough bark of large trees, in a fork in some fruit tree, even in a hole in a broken-down wall. In fact any small cavity suits the bird well enough, provided that the nest is well supported all round, as it is a somewhat loosely built structure, composed of dry grass, moss, cobwebs, lichens, and sometimes a few feathers, lined with a profusion of hair, rootlets, and sometimes a feather or two. Sometimes a nest is built of root fibres and sticks, and copiously lined with wool. The same situation is often tenanted year after year, presumably by the same pair of birds; but if subjected to repeated disturbance they will sometimes quit the spot for a season or two, returning again to it afterwards.

The eggs laid vary in number from four to six; they are bluish white in ground-colour, ranging to greenish blue, spotted, blotched, and clouded with reddish brown of various shades. Some eggs have the markings in a zone round the larger end, others are so profusely spotted that the ground-colour is almost hidden, while some have a few large blotches of colour on the large end of the egg, the rest of the surface being sparsely speckled with small spots of colour. One very beautiful variety is clouded with a faint pinkish bloom, which, however, soon fades after they are blown. They vary in length from ·79 to ·7 inch, and from ·61 to ·53 inch in breadth. One brood only is reared in the year as a rule, though occasionally the birds succeed in hatching out a second.

PLATE I

SPOTTED FLYCATCHER. *Muscicapa grisola*

June 1st, 1893.—The nest depicted in the Plate was built in a small hollow in the bole of a large tree overhanging the River Teith, Perthshire. The bird had evidently had some difficulty with a large mass of wool which was attached to one side of the nest, as it stuck out from the back of it in an untidy lump.

All along the banks of the river I saw great numbers of Spotted Flycatchers and found several nests; but they were all quite impossible to photograph, as they were usually on thin branches overhanging the water, and some height from the ground.

SPOTTED FLYCATCHER. *Muscicapa grisola.*

1/2 NATURAL SIZE.

TEAL

Querquedula crecca

THE Teal is a somewhat locally distributed resident throughout the British Islands. In winter its numbers are largely augmented by migrants from further north. Large numbers frequent the coast at this season, but many retire inland to the lakes, rivers, and swamps, moving southward in very severe weather. It breeds in most suitable districts throughout Great Britain and Ireland, but is more common in the northern districts.

The habits of the Teal differ very little from those of its congeners: its food is the same—a mixture of animal and vegetable substances,—and it loves to haunt the same reedy lochs, rivers, and swamps, though perhaps it is hardly so partial to the mudbanks on the sea-shore as its relatives are. It is not nearly so shy a bird as the Mallard or Shoveler, and often swims about among the reeds, allowing itself to be watched from quite a short distance without any sign of fear. On the wing it is very swift, and rises easily from the surface of the water without much splashing. It is the smallest European duck, and quite the tamest. Few birds can show such a magnificent diversity of colouring as the Teal Drake in full nuptial plumage.

The alarm-note of the Teal is a short sharp '*krake*,' somewhat harsher than the call-note, which is a loud '*krik-krik*,' and during the pairing-season the drake may often be heard to utter a harsh grating note. During migration the flocks of Teal are sometimes very large; but even in these huge assemblages very little noise is heard, except the whistling of countless wings and an occasional quack. It is quite as gregarious as the Wigeon and Mallard, and, except during the breeding-season, is usually met with in flocks of varying size.

The favourite breeding-haunts of the Teal are among the scattered trees

and long heather in some forest swamp not far from the water, or among the rushes or long grass near some reedy loch. As a rule a fairly dry site is chosen for the nest, which is usually very artfully concealed amongst heather or under some small willow bush or tuft of coarse grass. It is a somewhat deep hollow lined with a little dry grass, and a profusion of down, which is added as the full complement of eggs is reached.

From eight to twelve eggs are laid, nine or ten being the general clutch. They are buffish white in colour, sometimes tinged with a greenish shade, and vary in length from 1·75 to 1·55 inch, and in breadth from 1·40 to 1·28 inch. The eggs of the Teal are slightly smaller than those of the Garganey, but the down is the most certain means of identification, that of the Teal being dark brown without any white tips, while that of the Garganey is a somewhat greyer brown with peculiarly long white tips, even more conspicuous than those on the down of the Shoveler and Wigeon.

The period of incubation lasts about twenty-two days; and after the young are hatched the drake assists his mate in the care of them until they are nearly fully fledged, when he retires to some lonely place until he has assumed his brown plumage. Young in down have the upper parts dark brown, with whitish spots on the sides of the rump, wings, and scapulars. The under-parts are pale brown, palest on the belly and shading into buff on the throat. There is a buff stripe over the eye, and a dark brown spot on the end of the ear-coverts is prolonged into a dark streak which joins a brown stripe passing through the eye on the side of the neck.

There are very few prettier sights than a brood of young Teal swimming about on some dark, peaty, forest pool, closely attended by their watchful parents. The little birds are very tame, and, if the observer sits quite still, the family party will swim in and out among the reeds at quite a short distance.

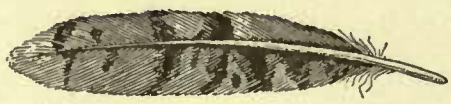


PLATE I

TEAL. *Querquedula crecca*

May 6th, 1893.—Walking along the shore of a small loch in South Perthshire I put up a Teal, almost stepping on her, so closely did she sit. Having left the nest in such a hurry she had not covered the eggs, and it was such a pretty nest that I took a photo of it, though the wind was rather strong, and blew the heather about a good deal.

The keeper showed me two other nests not far off; but the birds were away feeding, and had covered up the eggs with the down, to save them from the crows, leaving nothing visible but a little patch of down among the long heather which grew close down to the loch.

TEAL. *Querquedula crecca.*

3/7 NATURAL SIZE.

UNIV
CALIF

PHEASANT

Phasianus colchicus

IT is hardly correct to call the Pheasant an indigenous bird in the British Islands. The date of its introduction to this country is unknown, though it is supposed to have been introduced by the Romans. It is distributed wherever there is sufficient cover to protect it, and may be found in a semi-domesticated state in most districts throughout the British Islands.

The favourite haunts of the Pheasant are among the woods and plantations adjoining well-cultivated lands, where it can leave the shelter of the undergrowth in the early morning and evening to feed, ready to run back into the cover on the slightest alarm. It is essentially a ground bird, and will trust to its powers of running for safety, only taking to its wings as a last resource, though if repeatedly disturbed it will seek refuge in some tree. At cover shoots, where the birds have been frequently shot at, I have often seen Pheasants fly quietly up into some thick fir-tree, from which no amount of shouting or beating the tree with sticks would dislodge them.

The food of the Pheasant is composed of insects, worms, grain, small seeds, and berries, especially elderberries and blackberries. In the autumn they devour immense quantities of acorns and beech-mast. During the winter they subsist chiefly on the artificial food spread for them by the gamekeepers, the birds from the outlying plantations collecting where the food is put down. At this season of the year they often become almost as tame as barn-door fowls, picking up the Indian corn and damaged raisins at the keeper's feet.

In the British Islands the Pheasant is polygamous, probably on account of the inequality in numbers of the sexes, far more cocks being killed in the shooting-season than hens. Most of the Pheasants found in our Islands at

the present day are crosses between the Common Pheasant and Ring-necked species. Pairing takes place every spring in April and May, and many are the fierce fights which take place over the females, the strongest males often having as many as eight or nine in their harem. As soon as the eggs are laid the male deserts them altogether, and leaves them to rear their families alone, though instances have been recorded of the male being put up from the nest. The flight of the Pheasant is very swift, and is performed by rapid whirring beats of its rounded wings. Few birds make such a noise in rising from the ground as an old cock Pheasant, the loud rattling whir of his wings sounding somewhat startling as he rises unexpectedly in some quiet corner of the wood.

The hen Pheasant makes her own nest, which is a very simple structure, being merely a slight hollow in the ground lined with a little dry grass and a few leaves. It is usually placed under some tangle of brambles or briar, among dead ferns or tussocks of grass. From nine to fourteen eggs are laid, though as many as twenty-six are sometimes found; probably these large clutches are the produce of more than one bird. The eggs are olive-brown in colour, sometimes bluish green, with a smooth and polished shell full of very minute pits. They vary in length from 1·92 to 1·75 inch, and in breadth from 1·45 to 1·33 inch. Very small eggs are occasionally met with, generally known by the keepers as 'toys.'

The old bird is very wary when leaving and approaching her nest, always flying from it and returning in the same way, so that no scent is left for an enemy to track. When she leaves the nest to feed she carefully covers the eggs with leaves and grass from the sides. Only one brood is reared in the season, the hen taking charge of them in much the same manner as the domestic fowl; but the Pheasant is rather a careless mother, and often loses many of her chicks in ditches or long grass, seeming to be quite content if two or three chicks are following her. The young birds advance towards maturity very slowly, and seldom are able to fly before the end of July—even later in some seasons.

PLATE I

PHEASANT. *Phasianus colchicus.*

May 10*th*, 1893.—The Pheasant's nest in this Plate is a remarkably open one; when I came across it the bird was sitting on the eggs with her tail up against the trunk of the tree. I succeeded in getting everything ready, but she flew off just as I was putting in my slide.

One of the eggs was very small, and had no yolk to it; it was covered with tiny excrescences of chalk, and had a very thick shell.

PHEASANT. *Phasianus colchicus.*

3/7 NATURAL SIZE.

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN. A. J. LEE

PART XII.

TREE CREEPER	1	PLATE.
BLACKBIRD	2	"
ROCK PIPIT	1	"
MAGPIE	1	"
RINGDOVE	1	"
SEDGE WARBLER	1	"
DIPPER	1	"
FULMAR	1	"
DUNLIN	1	"

EDINBURGH. DAVID DOUGLAS.

TREE CREEPER

Certhia familiaris

THIS unassuming little bird is a resident in our Islands, and is pretty generally distributed throughout most wooded districts. It is occasionally recorded from the Orkneys and Shetlands, but apparently does not wander to the Outer Hebrides.

From its retiring habits and the quiet colour of its plumage, the Tree Creeper is a bird which is very often overlooked. Its home is in the woods, and it is perhaps most abundantly distributed in old forests where there are large trees, many of them very old and much decayed, for on these old trees is found the greatest abundance of insect food. It is often seen on the trees in the garden or on the large beeches which are dotted about in some park; but these are only occasionally visited in quest of food, for the Creeper's haunts are in the depths of the woods.

The Tree Creeper has the stiff, pointed tail-feathers of a Woodpecker, which are of the greatest service in ascending the perpendicular trunks of trees. The tail is pressed against the bark, and is used as a sort of prop. How quickly the little bird can ascend the rough moss-covered bark of the trees, stopping every now and then to capture some insect or to pick out some tiny grub from the crevices in the bark! Notice, too, how quickly it disappears round the other side of the trunk on your slightest movement, gradually working its way up to the top of the tree, when it flies off to the bottom of the next one, to resume its quest for food. Now and then the Creeper may be seen on the ground searching among the dead leaves at the foot of some tree, or hopping about on some pile of pea-sticks, and may sometimes be seen bathing in the little pools of water lying in some cart-track through the woods. During the winter almost every flock of Tits which

one meets with in the woods contains at least one pair of Creepers, who diligently search the bark of the tree while the Tits are working at the buds and twigs. The call-note of the Creeper is a feeble but penetrating '*cheee-cheee*'; its song is but rarely heard, usually in the very early spring, reminding one rather of the vocal performances of the Golden-Crested Wren, but not so loud.

The food of the Creeper is almost entirely composed of the insects and gnats which lurk in the crevices of the rough bark of forest trees. The bird seems to have a decided liking for small spiders, as I have seen a Creeper pull these insects from their webs on the windows of a disused stable, and often observed the bird there searching the corners of the panes as if it expected to find the webs tenanted by other spiders.

About the middle of April the Creeper begins to lay. The nesting-site is somewhat varied. Sometimes the nest is placed behind some large piece of bark which has peeled away from the decaying trunk of a dead tree, sometimes in the split and torn stump of a fir-tree which has been smashed by the winter's gales, or in a cavity between two trunks of a beech. More rarely it is found in some pile of branches leaning against the trunk of a tree, in a crevice in a wood-stack, or in some corner in an out-house. The nest is beautifully built. The hollow in which it is placed is often rather larger than is necessary, and is carefully filled up with twigs of beech and birch, or tiny pieces of dead wood. The nest proper is beautifully built of moss, dry grass roots, and a few feathers, edged with the finest twigs, and very often lined with fine strips of the inside bark of trees. Two broods are frequently reared in the year, but rarely does the second laying consist of more than four or five eggs. From six to nine eggs are usually laid; the ground-colour is sometimes pure white, sometimes creamy white, marked with brownish red spots and a few greyish underlying markings. They vary considerably in the number and placing of the markings, though all the eggs in one clutch are usually of one type. In some clutches the spots are confined to a zone round the large end of the egg; in others the spots in this zone are confluent, forming a ring of colour; while in others again they are few in number, and scattered pretty evenly over the entire surface. In these last specimens the spots are usually much darker and of a deep reddish brown. The eggs vary in length from ·68 to ·58 inch, and in breadth from ·48 to ·44 inch.

PLATE I

TREE CREEPER. *Certhia familiaris*

May 8th, 1897.—Monteith.—The large beech depicted in this Plate has been the nesting-site of a pair of Creepers as long as I can remember. The first Creeper's egg which ever graced my collection was taken from this very same situation in May 1881, and there has been a nest in this tree every year since.

The cavity in which the nest is placed is just below a branch growing out of the bole of the tree not more than four feet from the ground; the nest is in rather the same sort of position in which one would expect to find a Robin's nest, as it is quite open, and only two or three inches from the lip of the cavity. It is nearly always beautifully edged with very fine birch twigs, which must be carried some distance, as there are no birches anywhere very near; it is lined with fine strips of inside bark and a good many feathers. As often as I have examined the eggs in this nest I have found them of the same type, very richly spotted with rich dark reddish brown, the markings being collected into a very conspicuous zone round the larger end of the egg; one egg in the clutch is usually spotted at the small end. This points out that the same pair of birds has occupied this site year after year.

In 1889, 1892, 1893, 1895, and 1896 a second brood was reared, as I found fresh eggs in the last week of June; in each year the second nests were all fives, except in 1893, when only four were laid.

TREE CREEPER. *Certhia familiaris.*

BLACKBIRD

Turdus merula

FROM the richness of its song and its love for the gardens, orchards, and shrubberies around our dwellings, the Blackbird is the best-known of our British Thrushes. It is abundantly distributed throughout Great Britain wherever trees abound. It is also a resident in many of the outlying islands, and breeds on the Orkneys, Shetlands, and Outer Hebrides, though it is only an irregular visitor to some of the more desolate islands. The Blackbird breeds on the Bass Rock and on Ailsa Craig, both localities being apparently quite unsuited to the habits of the bird.

The Blackbird is a shy, retiring bird, and its haunts are among the woods, plantations, and thickets, where there is plenty of cover to afford it seclusion. Its favourite haunts are among the shrubberies and thickets of evergreens bordering some lawn or stretch of well-mown grass, where it can obtain its food in the open and retire to the shelter of the laurels and rhododendrons on the slightest alarm. Along the hedgerows between the fields the Blackbird may be seen in large numbers, especially in summer, when the vegetation is thick and close; and the wooded banks of streams and swampy corners in the woods have a great attraction for the bird, on account of the food which is to be obtained in these places. The Blackbird is rather a difficult bird to flush: it will hop along the ground and creep in and out of the brushwood rather than take to its wings; and if at last it be compelled to seek safety in flight, it will drop down again into the nearest patch of cover. It rarely flies at any height, and seems to prefer skulking along some hedge or line of trees rather than expose itself to view in the open air. The Blackbird does not stray far from its haunts, and usually frequents some particular locality throughout the whole season, only making short excursions to its feeding-grounds, which it visits morning and evening with great regularity.

The early morning is the best time to watch the Blackbird seeking its food, which consists of the small slugs and earthworms which abound on the lawns and pasture-lands. One by one the birds fly down from the evergreens and alight on the grass, with a graceful motion of the tail, pausing for a moment, with the appearance of listening intently before they begin to feed. Along the hedge-rows, among the undergrowth, are snails which live in bright-coloured shells; these the Blackbird dashes to pieces against some stone, and greedily devours the juicy morsels thus obtained. In autumn the turnip-fields are alive with these birds seeking the snails and worms which abound in the loose soil under the leaves, and at this season they also devour large quantities of berries, chiefly those of the mountain ash and hawthorn. In the fruit season the Blackbird takes its toll of the cherries, currants, and strawberries in the garden, often paying the penalty of death in the gardener's nets.

The Blackbird commences to sing late in February, and its rich mellow notes may be heard from that time till the end of May, when it gradually leaves off singing and remains silent during July, when the autumn moult is in progress, rarely commencing again before the next spring. In compass and richness of tone the song of the Blackbird is unsurpassed, though it possesses little variety. The early morning, and in the evening as the sun is sinking, are the times when the Blackbird sings its sweetest. Perched on some lofty tree, it pours forth a continuous stream of rich mellow notes, which have an indescribably soothing tone about them.

During the pairing season the Blackbirds are extremely pugnacious, and the males may often be seen chasing each other through the branches and fighting with perfect fury.

Early in April the Blackbird builds its nest. Its breeding-haunts are among the woods, plantations, and shrubberies. Very varied situations are chosen for the nest, though preference is given to evergreens. Sometimes the nest is placed far up the ivy-covered trunk of some tall tree, sometimes in the fork of an apple-tree, or in a low, thick laurel bush. It is also pretty often built on the ground in steep ravines among ferns and coarse grass. Curious sites are often chosen: one nest was built on the steps of a ladder leaning up in a corner of an old potting-shed; and another, not far off, was placed in a hole in a wall in just such a site as a Robin would build. I came across a Blackbird's nest on the ground among very long heather in the middle of an open space in a large wood.

The nest takes some time to complete, and passes through three stages. The foundation is somewhat loosely built of coarse grass, leaves, and moss,

amongst which a few twigs are usually woven; this is then lined with mud or clay, and is often hard to distinguish from the unfinished nest of the Song Thrush; the final stage consists in the addition of a thick lining of fine dry grass beautifully finished. It is usually rather a bulky structure, and somewhat flat.

From four to six eggs are laid, though it is said that even larger clutches are occasionally found. They vary considerably in shape, size, and colour; some specimens are nearly round, others are oblong, while still others are pear-shaped. The ground-colour is usually a bright bluish green, spotted, streaked, or blotched with rich reddish brown and a few purplish marks. Some specimens have most of the markings arranged in a zone round the larger end of the egg, or collected into a blotch of colour on the top, others are richly blotched with large pale spots, while others again are so thickly spotted as to hide the green of the ground-colour entirely. Clutches are occasionally met with which are spotless, and of a pale bluish green. The eggs vary from 1·35 to 1·0 inch in length, and from ·91 to ·78 inch in breadth. Two broods are reared in the year.

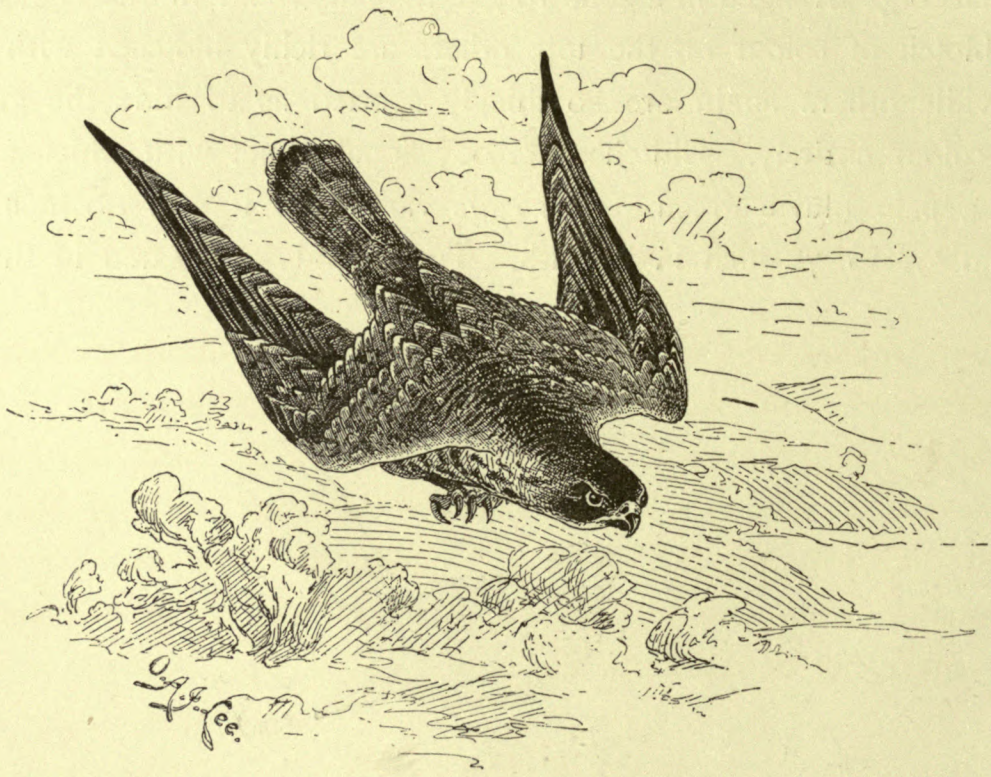

O. A. Lee.

PLATE I

BLACKBIRD. *Turdus merula*

May 3rd, 1894.—This nest was built in a blown-down Scotch fir on the outskirts of a small plantation in Tweedsmuir, Peeblesshire. I spent some hours trying to get a photograph of the bird on the nest, but had to give it up at last as a bad job. I could stand within four yards of her without the slightest difficulty, but the moment I produced my camera she flew off. I tried leaving it up and going away; but as long as it was there, nothing would induce her to return to the nest.

BLACKBIRD. *Turdus merula.*

Plate I.

1/3 NATURAL SIZE.

PLATE II

BLACKBIRD. *Turdus merula*

May 7th, 1897.—I stumbled across this nest as I was walking up a small glen in South Perthshire: the bird flew away hurriedly and disclosed her nest. It was built on the ground in a patch of dog's-mercury on a very steep bank, and was placed on a piece of a dead branch embedded in the moss and grass.

BLACKBIRD. *Turdus merula.*

1/3 NATURAL SIZE.

ROCK PIPIT

Anthus obscurus

THE Rock Pipit is a resident on all the coasts of the British Islands, with the exception of the southern portion of the low-lying eastern coasts of England, where it is only a straggler during migration. It breeds in all the rocky islands round our coasts, including the Outer Hebrides, the Orkneys and Shetlands, and St. Kilda.

The haunts of the Rock Pipit are on the rocky parts of the coasts, and the bird frequents the cliffs and rocks to the high-tide mark: it is quite as partial to rocky islands as to the mainland, and is a resident throughout the year on nearly all the smaller rocky islets, such as the Bass Rock, the Isle of May, Ailsa Craig, and the Farnes. It is a very restless little bird, and when its haunts are invaded it flits from rock to rock before the intruder, uttering its shrill call-note, a sharp '*ssst*' or '*pssst*,' which it keeps up incessantly if its nest is in danger. It is not a shy bird, and can be approached within quite a short distance. When flushed from the beach it flutters into the air, hovering above the intruder's head in an inquiring fashion, and continually uttering its call-note, flying away at last to some rock with a curious jerking flight. It is not a gregarious bird during the breeding season, but may be seen in small flocks during the winter.

The Rock Pipit commences to sing before the pairing season, which takes place about the middle of March; like all the Pipits, it usually sings when on the wing. During the pairing season it sings almost incessantly, rising into the air and slowly gliding down again to its perch with wings and tail expanded. Although its notes are musical, it cannot compare with the Tree Pipit either in the richness or variety of its song. Sometimes the

bird rises into the air, uttering its sharp call-note repeatedly, and glides down again to its perch in full song.

The food of the Rock Pipit is principally composed of small shells, insects and their larvæ, varied with small seeds. A great deal of its food is obtained on the seaweed which has been cast up by the waves beyond high-tide mark. The heat of the sun soon causes the weed to putrefy, and forms a nursery for millions of small black flies; on these the Rock Pipit feeds, and the bird may often be seen to catch them in the air, hovering like a fly-catcher. In the autumn the Rock Pipit wanders from its accustomed haunts, and frequents the low-lying marshes on the sea-coast, showing a decided preference for the grassy portions of mud-flats and the low banks of shingle on the edge of the marshes.

The breeding season of the Rock Pipit commences about the middle of April, eggs rarely being found before the end of the month or the beginning of May. The nest is seldom very far from the sea; it is nearly always very well concealed in some sheltered situation,—under a stone, under a heap of seaweed, or in a crevice in the rocks, often in the middle of a tuft of sea-campion. In the Shetlands I have frequently seen it in some absolutely inaccessible crack in the face of the cliffs hundreds of feet above the sea, and I found two or three nests in piles of stones in such situations as a Wheatear would have chosen. The nest is sometimes entirely built of fine dry grass; sometimes the outside is composed of the stems of various plants, such as sea-campion or sea-pinks intermixed with a little seaweed, and lined with fine grass, and moss is often used in the foundation; other nests are lined with hair, and Gulls' feathers are sometimes woven into the sides.

Four or five eggs are laid, which do not vary in type very much. The ground-colour is nearly white, but it is so much obscured by the profusion of the markings that it is seldom visible. The surface-marks are small, and vary from reddish brown to brownish grey; the underlying spots are always pale grey. On most specimens the markings are very small and confluent, often forming a zone round the larger end of the egg. Some specimens are more boldly blotched than others, and very pale examples are not uncommon. Some clutches are marked with very dark hair-like scrawlings on the large end of the egg. They vary in length from ·91 to ·79 inch, and in breadth from ·66 to ·59 inch. Two broods are usually reared in the season.

PLATE I

ROCK PIPIT. *Anthus obscurus*

June 28th, 1893.—As I was walking among the old buildings on the Bass Rock, a Rock Pipit flew out from a tuft of bladder campion growing out of a crack in the rock, and when I went up to investigate, I found the nest with four fully fledged young birds in it.

The nest was beautifully concealed, and I would never have suspected its presence there, had not the old bird flown out. All the time I was taking the photograph the old birds fluttered around in a dreadful state of anxiety, uttering their call-note incessantly and hovering in the air above my head.

ROCK PIPIT. *Anthus obscurus.*

1/2 NATURAL SIZE.

MAGPIE

Pica rustica

FEW birds are so well known as the graceful and pert Magpie. The beauty of its plumage and its cheery chattering cry make it one of the most popular of our British birds. It is a fairly common bird throughout the British Islands, though somewhat local in its distribution. It does not stray to the outlying islands.

Although the Magpie is commonest in the well-wooded districts, it is not, properly speaking, a woodland bird. Open parks studded with groups of trees are its favourite haunts, and it may even be seen on the edge of the moors in the vicinity of some fir plantation, to which it can retreat if alarmed. It is a very wary bird, and seldom can be approached within gunshot, though in places, where it is left unmolested, it will haunt the bushes round cottages, and build its nest in an open tree or tall bush in some garden. In the pasture-lands the Magpie may often be seen walking about among the feeding cattle, sometimes even perching on their backs. It is a gregarious bird in many of its habits, and numbers of them gather together in the autumn and winter to some fir plantation, where they roost.

The note of the Magpie is a harsh chatter, uttered as the bird hops from twig to twig in some tall tree. During the breeding season it utters a number of notes which are seldom heard at any other season; among these may be mentioned a shrill piping whistle.

The destruction which the Magpie works among the eggs and young chicks in the game-covers has earned for it much of the persecution to which it is subjected. But it does a great deal of good at certain seasons, by devouring large quantities of the noxious insects and grubs which frequent the pasture-lands. Snails and worms are also eaten greedily, and it is said to pick the vermin from the backs of sheep and cattle. In autumn the Magpie eats the acorns and beech-mast, and does not object to an occasional meal of carrion if hard pressed for food.

Though the Magpie is found almost everywhere in the British Islands, it is only in wooded districts that their nests may be found in any numbers.

Some localities are specially favoured in this respect, and numbers of nests may be seen in a short walk, while in other districts there may be only one solitary pair. Sometimes the bird chooses a solitary tree standing in a hedge-row in which to build its bulky nest, but it is most commonly placed in some small plantation. Almost every kind of tree is used as a nesting-site, and the bird often builds in some thick tangled hawthorn only a few feet from the ground, but so well protected by the sharp thorns that it is well-nigh impregnable. The Magpie often returns year after year to the same nesting-site, patching up the old nest and re-lining it with rootlets; such nests are usually enormous structures, and the basket-like dome which covers them is enlarged till it covers nearly the whole top of the tree.

The Magpie is a fairly early breeder, and commences the work of nest-building during the end of March or the beginning of April. The nest is usually placed among the thin branches at the top of the tree, and is built of sticks cemented together with mud and clay and lined with a fine soft bed of rootlets; in a few instances dry grass is used as a lining. The principal peculiarity of the Magpie's nest is the large dome of thorny sticks which entirely covers the nest, only a small hole being left, just above the lip of the cup which contains the eggs, for the old bird to get in and out by. The nest cavity is very deep for its breadth, and the lining is so smoothly finished that the inside is as round as a basin. When the nest is approached, the Magpie will slip quietly away if the eggs be fresh; but if she is sitting, it often requires much shouting and repeated blows on the trunk of the tree to dislodge her. When the young are hatched both birds fly round and round the tree at some height in the air on the approach of an intruder, uttering their chattering cry.

From six to eight eggs are laid, larger clutches being occasionally found; they are very small for the size of the bird, and vary considerably in this respect even in the same clutch. The ground-colour varies from bluish green to greenish buff, sometimes very nearly white. The surface-markings are small and of a greenish brown colour, occasionally deep brown; underlying spots are greyish purple. On some specimens the markings are evenly distributed over the entire surface; on others many of them are confluent, forming a patch of colour on the end of the egg; while on a third variety they are collected in a distinct zone round the large end of the egg. They vary in length from 1·45 to 1·20 inch, and in breadth from 1·0 to ·87 inch.

Only one brood is reared in the year, but if the first clutch be destroyed a second nest is made.

PLATE I

MAGPIE. *Pica rustica*

April 24th, 1894.—The nest from which this Plate was taken was built in a small fir plantation in Tweedsmuir; the trees in the wood were very small, the tallest being only about eighteen feet. The nest was very open, and the eggs easily visible from the next tree, where I managed to set up my camera.

This was the only pair of Magpies in the district, and I only heard of it by chance from one of the keepers, who was on his way to the plantation to shoot the old birds. He failed, however, to do so that day, so I got my photograph before the nest was destroyed.

MAGPIE. *Pica rustica.*

1/4 NATURAL SIZE.

RINGDOVE

Columba palumbus

THE Ringdove is a common and widely distributed resident throughout the British Islands, wherever there are woods. In the Outer Hebrides, and the Orkneys and Shetlands, it is known as a straggler in spring and autumn. In winter its numbers are augmented by migrants from the Continent.

The Ringdove or Wood-pigeon is the largest and best of its genus in the British Islands. Its haunts are among the wooded districts, from the large low-lying forests in the south to the fir plantations on the mountain-sides of the Highlands. It is specially fond of parks studded with clumps of trees and small plantations, and frequents the ivy-covered trees and large yews in shrubberies.

The food of the Ringdove is chiefly composed of vegetable substances. During the summer they feed on green corn, clover shoots, beans, peas, and all kinds of fruit, such as blackberries, hips and haws, and holly berries. In the autumn they devour huge quantities of all kinds of ripe grain and the seeds of various plants, and may often be seen under the trees searching for acorns and beech-mast. When hard pressed in winter the tops of turnips and winter cabbages are taken, and as these bird are voracious feeders they do a great deal of damage in districts where they are very numerous. The Ringdove may often be seen on the sea-shore taking small pieces of the seaweed lying on the beach, for it is very fond of salt, and at certain seasons it eats large quantities of tiny land shells.

The murmuring love-note of the Ringdove is one of the best-known sounds of spring; it seems to fill the whole wood with its soothing tones. It is a low mournful '*coo-coo, coo, coo-coo,*' repeated over and over again, and rising and falling in a sleepy sort of rhythm, often stopping suddenly in the middle of a note. A single penetrating '*ooo-cooo*' is sometimes uttered by the male as he sits perched on some branch not far from his sitting mate.

The Ringdove is an early breeder, often beginning to lay in the last few days of March. I have two very early records of Ringdove's nests containing eggs, one on the 9th of March and one on the 11th, and I have frequently seen nests containing eggs in the last week of that month. The favourite site for the Ringdove's nest is in some thick spruce fir-tree in a plantation, the nest being usually placed close against the trunk of the tree. Almost every kind of tree is used as a nesting-site, and a favourite place is among the masses of twigs which are often seen round the lowest branches of a lime-tree. It is sometimes built in the ivy which covers some ruined tower or church. The same nest is often tenanted year after year, being added to and strengthened each spring.

The nest is rudely made, being merely a flat platform of twigs, generally those of the birch, and sometimes so loosely put together that the eggs are distinctly visible from below; sometimes it is built on an old Squirrel's drey or on a deserted nest of a Sparrow-hawk or Crow.

The eggs are two in number, never more, but sometimes only one is laid. They are oval in shape, and of a glossy white, with a very smooth polished shell. They vary in length from 1·7 to 1·5 inch, and in breadth from 1·40 to 1·15 inch.

Both birds take their turn in incubating the eggs, and when the young are hatched the old birds are kept busy from sunrise to sunset in supplying the voracious appetites of the nestlings. The young birds grow very slowly, and pick the semi-digested food from the mouths of their parents, who eject it from their crops. As soon as the young can fly, the old birds set about building another nest, three broods being sometimes reared in the year. It is no uncommon thing to find nests of the Ringdove containing fresh eggs as late as the middle of August, and I took a pair of eggs which were perfectly fresh from a nest in a lime-tree near Callander on the 2nd of September.

PLATE I

RINGDOVE. *Columba palumbus*

April 12th, 1894.—Tweedsmuir.—This nest was built in a large spruce fir-tree in a plantation on the hillside. I got my camera set up half way out on a large branch, and had some difficulty in focussing it, as it was so dark in the middle of the tree. Using a small diaphragm and an instantaneous plate, I thought I would be quite safe if I gave it forty seconds; but I had to expose it for nearly two and a half minutes before I could get any detail. The great difficulty was to keep perfectly still for that length of time, as the slightest movement blurred everything.

RINGDOVE. *Columba palumbus.*

2/5 NATURAL SIZE.

SEDGE WARBLER

Acrocephalus phragmitis

THE Sedge Warbler is a common summer visitor to most suitable districts throughout the British Islands. Its arrival in this country takes place during the last few days of April, or the beginning of May in late seasons.

The haunts of the Sedge Warbler are among the tangled bushes and thick vegetation which is found in the neighbourhood of swampy ground, and not entirely among the reeds and sedges, as its name suggests. It is especially fond of frequenting the stunted bushes which fringe the shores of lakes, ponds, and streams. It is rather a skulking bird, and prefers to hop from twig to twig among the tangle, where it can elude detection. Now and then, however, it may be seen on the topmost twig of some bush, pouring forth its song, shifting restlessly about all the while, and finally disappearing again among the bushes.

The song of the Sedge Warbler is somewhat like that of the Whitethroat, but has a much greater variety of notes; some of these are full and rich in tone, while many others are harsh and piercing. The bird sings almost incessantly, often as it flies from bush to bush, and seems to vary its own song by imitating the notes of other birds. In the pairing season it is especially vociferous, and its loud cheery note may be heard at all hours during the night. Its call-note is a harsh, grating '*churrr*' rapidly repeated, and when its nest is in danger it has a long, scolding note, '*chzzzz*,' reminding one rather of the alarm-note of the Whitethroat.

Insects and their larvæ form the chief part of the Sedge Warbler's food, and the little bird may often be seen darting out from some bush to secure a passing insect, or fluttering over the water among some cloud of gnats dancing in the sunshine. Small worms and caterpillars are also considered dainties.

Early in May the Sedge Warbler commences to build its nest, which is always supported by the branches or growing plants, and never suspended between the reeds like that of the Reed Warbler. On the shores of the lakes and streams the nest is usually built in some convenient fork in the willow bushes, or in the bushes choked with grass and covered with brambles which grow along the confines of some swampy piece of ground. In the Norfolk broads I have frequently found it on the ground, or supported on a heap of dead Carex, and it is often built in the bottom of some hedge growing alongside a deep broad ditch. If the marsh be a large one, and suitable tangles be few and small, many nests may be found within a few yards of one another. They are simple, unassuming little structures of dry grass stems, bits of sedge and moss, lined with hair, and sometimes with the down of marsh plants or reed flowers.

Five or six eggs are laid, very rarely seven. They may be divided into two types, though they go through nearly every intermediate variety. The first type is greenish buff with pale and rather indistinct mottlings of buffish brown. The second is buff in general colour, with very pronounced markings of rich brown, and sometimes deep reddish brown. The ground-colour of both types is a pale bluish white, but it is nearly always entirely hidden by a buffish tinge which suffuses the whole egg. Nearly all varieties are also marked with fine scratchy lines of blackish brown; on some specimens these lines are so fine as to be almost invisible, while on others they are bold and distinct. The eggs vary in length from ·74 to ·58 inch, and in breadth from ·54 to ·49 inch.

Only one brood is reared during the season, but if the first clutch be destroyed a second nest is built, generally not very far from the original site. The Sedge Warbler, which frequents the tangled vegetation, may be easily distinguished from the Reed Warbler, which lives among the reeds, as the former bird has a spotted appearance and the latter a plain one—no doubt a provision of Nature for protection, so that each bird may be as inconspicuous as possible in its different haunt.

PLATE I

SEDGE WARBLER. *Acrocephalus phragmitis*

May 30th, 1895.—This nest was photographed in a small patch of willow scrub and tangled brambles near a reedy backwater on the river Teith, Perthshire. The Sedge Warblers were very abundant all up the river, and as there were few patches of suitable scrub for them to nest in, the nests were fairly close together in suitable spots. In this particular patch, which was perhaps twelve yards long and half that width, I examined no less than nine nests, and there were probably more, as some of the places were so thick and so overgrown with brambles that I was unable to examine them. The birds kept up a continuous warbling all day, which became almost deafening in the evening, as each one vied with his neighbour in singing his loudest. Nearly all the nests were lined with the down from the catkins of a shrub, which grew in great profusion in the marshy parts of the patch of willow scrub.

SEDGE-WARBLER. *Acrocephalus phragmitis.*

1/3 NATURAL SIZE.

DIPPER

Cinclus aquaticus

THE Dipper is a bird of the rapid streams. In Great Britain it is chiefly found in the mountainous districts of England and Wales, and throughout Scotland and Ireland it is a common bird wherever the waters are rapid enough, either in the wilds of the north or in the southern counties.

The haunts of the Dipper are confined to the swift rapidly-flowing rocky mountain streams. Here it is found throughout the year, and is quite as active when the rocks are draped with ice as in the burning heat of the summer sun. The roaring mountain streams never freeze, and hence the bird is always able to obtain its food. It is not a migratory bird in the British Isles, but the young birds are driven by their parents from districts which become too crowded. On the barest of mountain-sides, where the little stream leaps down the rocky glen among jagged rocks where not a tree or shrub grows, the Dipper is just as much at home as it is where the birches and mountain ashes grow among the clefts in the rock overhanging the stream which wanders down some wooded glen. It is a bird of great activity, and flies with rapid unswerving flight, now landing on some boulder round which the waters boil and splash, now alighting on some grassy bank, or diving into the boiling water, anon reappearing some distance down the stream. The Dipper is an expert at diving, sometimes swimming along under the water, aided by its wings, and searching the little stones at the bottom of the stream for the caddis-worms on which it feeds. Unlike the Kingfisher, the Dipper never dives into the water with a sudden plunge, but either wades into it or drops into it from some convenient stone. Now and then you may see it splashing about in some rapid part of the stream, as if it were trying to reach something at the bottom and was overpowered by the current.

Except during the breeding season the Dipper is a solitary bird, and even at that time the two birds are not often seen together. Each pair seem to haunt a certain part of the stream, beyond which they do not stray.

The song of the Dipper is rarely heard except in the spring; at that season, amid the rush of the waters, he sits on some boulder amid the spray from the waterfall singing his short song. It is a low warbling strain with a curious admixture of grating sounds, something like the letters '*zzzt*,' and is repeated at irregular intervals. The call-note is a double '*zzzt-zzzt*,' uttered most frequently as the bird takes wing.

The food of the Dipper consists of the larvæ of insects, which at this stage of their development are found in the beds of streams. Among the moss-grown pebbles at the bottom of the stream it obtains caddis-worms, small molluscs, and water-beetles, and from the marshy banks of the stream worms, gnats, and minute insects of every kind are procured. The bird has been accused of destroying large quantities of the ova of trout and salmon, chiefly on account of the method it employs in procuring its food; but beyond an occasional small fish, the Dipper subsists entirely on larvæ, which are in themselves the greatest enemies to the ova.

The Dipper is an early breeder, and eggs are often laid in March. The site chosen for the nest is usually on some ledge of rock or among the gnarled roots of some tree which overhangs the water. Only once have I heard of a nest being placed in a tree, and that because there was no other suitable place for it anywhere near. Though it is often placed in a most conspicuous position, it is so artfully built that it often escapes detection. On first sight it appears to be only a patch of moss growing on the side of the boulder on which it is placed. It is a domed structure like the Wren's, but the entrance-hole can only be seen from below, as the upper side of the entrance overhangs a little. The dome is constructed entirely of the moss which grows around in such profusion. Inside is an ordinary open nest, rather like a Blackbird's; this is built of dry grass, twigs, etc., and lined with dead leaves of birch and beech beautifully laid one on another. The same nest is often used year after year, undergoing a few repairs each spring.

The eggs laid vary in number from four to five, and are a pure and spotless white, with a somewhat rough surface. They vary from 1·1 to ·93 inch in length, and from ·76 to ·69 inch in breadth. Two broods are reared in the year.

PLATE I

DIPPER. *Cinclus aquaticus*

April 26th, 1897.—This Plate shows the nesting-site of a pair of Dippers, and gives a very good idea of the difficulty of seeing the nest. It is in the middle of the Plate, and is half concealed by the ivy which hangs over the face of the rock on which it is built. The nest contained five fully fledged young birds, so that the eggs must have been laid early in March. All the time we were at the nest the old birds flew round and round, uttering their call-notes, and now and then perching on some stone within a few yards of us, making little bobbing curtsies like a Robin.

I visited the nest this spring (1898) on April 18th, and found the young birds just leaving the nest; there was only one of them left when I examined it, the others were all sitting on the various boulders not far off. The same nest had been occupied as last year, but a fresh covering of moss had been put over the dome, making the nest look very large and bulky.

DIPPER. *Cinclus aquaticus.*

FULMAR

Fulmarus glacialis

ST. KILDA is the principal breeding station of the Fulmar in the British Islands, but during the last few years it has taken up its abode in small colonies along the precipitous cliffs of the west of Shetland, and there are now three or four fair-sized colonies. It is said to have bred in one locality on the west of Skye.

The Fulmar lives exclusively at sea, often at immense distances from land, and only visits some rocky island to rear its young. It has great powers of flight, and somewhat resembles a Gull in its colouring, but no one who has once seen it soaring with outstretched wings could ever mistake it for that bird. The Fulmar never seems to tire, but follows the whalers and deep-sea fishing-boats for the scraps of fish and offal that are cast overboard. When the bird takes a large piece of food it sits on the water and tears it to pieces with its powerful hooked bill, but smaller pieces are bolted whole. They follow the Atlantic steamers in small parties, sailing backwards and forwards in the wake of the ship, ready to pounce down on any scrap of food that may be thrown overboard.

The Fulmar is a very silent bird, and seldom utters a note of any kind. Only once have I heard a sound uttered by this bird, and that was in Shetland, in June, about midnight, as I lay on a flat piece of rock looking over the cliff at three or four Fulmars, sitting on their single eggs not far below me. The mate of one of these birds alighted beside it, and the sitting bird at once rose off the egg uttering a low crooning sort of note—'*coo-roo, coo-roo*,' rather like the murmuring notes of the Ringdove; it then flew from the ledge, leaving the new-comer to sit on the nest.

The food of the Fulmar consists of garbage of all kinds, and any oily substance, fish, molluscs, etc. In its stomach large quantities of sorrel are usually found, perhaps to counteract the effects of its oily food.

June is the month to observe the nesting habits of the Fulmar. On the St. Kilda group the greatest number of Fulmars breed, where the cliff, although very precipitous, is broken up into grassy ledges covered with loose rich soil and overgrown with sorrel, coarse grass, and other plants. Here almost every available spot is a Fulmar's nest, and as you move about the birds rise from every inequality in the turf. A slight excavation or burrow is made in the loose rich soil, but seldom deep enough to conceal the sitting bird. In some places a little grass is used as a lining to the nest, but in others the nest cavity is quite bare. In Shetland I never saw a nest with any sort of lining at all; it was simply some convenient corner on a rocky ledge—in fact, just the sort of site which a Guillemot would select. I noticed in this locality that a bird would get behind some stone on the cliff if it could, as if it preferred the shelter. The mates of the sitting birds flew backwards and forwards along the cliff face all day, with outstretched wings, only giving a few beats every now and then. I noticed that the Fulmar kept its wings absolutely stiff and straight while it glided along, not like the Gull, whose wings are always slightly bent at the joints; and the Fulmars seemed to turn on a pivot in the centre of their bodies, often describing a complete circle in the air without a movement of the wings.

The Fulmar lays its single egg about the middle of May, sometimes earlier and sometimes later, according to the season. It is pure white, and rough and chalky in texture, without any gloss, and retains the peculiar musky smell for many years after it is blown. They vary considerably in size, and very soon become stained by contact with the birds' feet and the soil on which they are laid. They vary in length from 3·25 to 2·7 inches, and in breadth from 2·15 to 1·8 inches.

Young in down are sometimes pure white and sometimes a dirty brownish grey with white breasts; I have seen numbers of both on one cliff. The old birds also seem to have a light and a dark phase, as is the case with Richardson's Skua. In St. Kilda, when the young Fulmars are nearly able to fly the Fulmar-harvest commences. This is the great event of the year there; the bodies are salted and stored for use in the winter, and the feathers are exported.

PLATE I

FULMAR. *Fulmarus glacialis*

June 20th, 1897.—This photograph was taken from a ledge of rock near the top of a cliff on the west coast of Unst in Shetland. Looking down from this coign of vantage, several Fulmars may be seen sitting on their eggs, while in the foreground a pair of Razorbills and some Puffins are sitting on the rocks. I got down among the Fulmars after taking some photographs, and found more than a dozen nests; these were simply little hollows among the chips of rock on the ledges, or in cavities where one would have expected to find Razorbills breeding. The Fulmars were absolutely tame, and I caught several in my hand, getting covered with oil for my pains, as the birds ejected it from their mouth with great violence, making a sort of coughing noise at the same time. There were many more nests below, but I had no rope with me; the cliff overhung somewhat and was very rotten, and I had no desire to fall a couple of hundred feet into the sea below by a slip. Although the eggs were all on the point of hatching, they were quite clean and white, no doubt owing to the clean rock on which they were laid. The St. Kilda eggs, which are laid on peaty soil, get almost black in some cases before they are hatched.

FULMAR. *Fulmarus glacialis.*

DUNLIN

Tringa alpina

DURING the spring and autumn migrations the Dunlin is the commonest of all the Sandpipers on the coasts of the British Islands, and there is little doubt that numbers of these remain in this country throughout the year. It is a regular summer visitor to the Outer Hebrides, and the Orkneys and Shetlands, but in England it is rather a local bird during the breeding season.

The Dunlin is the most gregarious of all the Sandpipers, and may be seen in enormous flocks, even during the breeding season. These flocks vary from a few individuals to thousands of birds. It is very fond of associating with other Sandpipers, especially on migration. In winter its favourite resorts are the mudbanks, exposed at low water in some estuary; there it may be observed running over the slimy surface of the mud, searching for the small worms, tiny molluscs, and marine insects on which it feeds. Sometimes it runs along in the shallow water as the tide slowly covers the mud, or dodges about among the tufts of sea grass on the shore at high water. When disturbed, the whole flock rises at once and flies off, seldom leaving even a straggler behind. It is a bird of very rapid flight, and rises quickly from the ground without any of the zigzagging motions of the common Snipe. When a large flock of these birds is flying in the distance they become invisible every now and then, as they wheel round and expose the upper part of their plumage to the observer, while yet again the whole flock flashes out white as the under parts are exposed to the sun.

The Dunlin is rather a quiet bird. Its call-note may be described as a grating trill, somewhat resembling the syllables '*trr-ee-ee-ee*,' or simply '*trr*.' During the breeding season, the male, in addition to the ordinary trill of the Sandpipers, has a hoarse cry rather like the word '*cheese*,' some-

what drawn out. This is generally uttered as he alights on the ground near his mate, and is usually accompanied by an elevating of the wings.

The Dunlin does not breed inland in such numbers as it does near the coast, except in suitable localities near some loch, or where the tidal rivers attract them. May is the month when most of the birds lay. The nest is very difficult to find, as it is so well concealed, but after one has seen three or four nests, it is easy to locate the sort of ground in which one may expect to find them. The site chosen is generally the middle of a tuft of grass, and numbers of nests may be found in close proximity in patches of that short curly grass which is found on marshy places among the sandy hillocks near the shore. The nest is a mere depression in the centre of a tuft of grass, scantily lined with a little dry grass, a few rootlets, and a little moss.

Four eggs are laid, placed in the nest in the manner peculiar to all the waders; they are subject to considerable variation in colour, and are usually very beautiful. The ground-colour varies from a beautiful pale green to a pale brown or buff, richly blotched, clouded, spotted, or streaked with various shades of rich reddish brown to dark brown or nearly black; underlying spots are indistinct and of a grey colour. On some specimens the markings are small and evenly distributed over the entire surface, on others they are large, and many of them confluent, forming irregular blotches of colour, chiefly on the large end of the egg. On many specimens they take the form of streaks lying obliquely to the longer axis of the egg: these are usually much the handsomest varieties. They vary in length from 1·41 to 1·20 inch, and in breadth from 1·0 to ·89 inch.

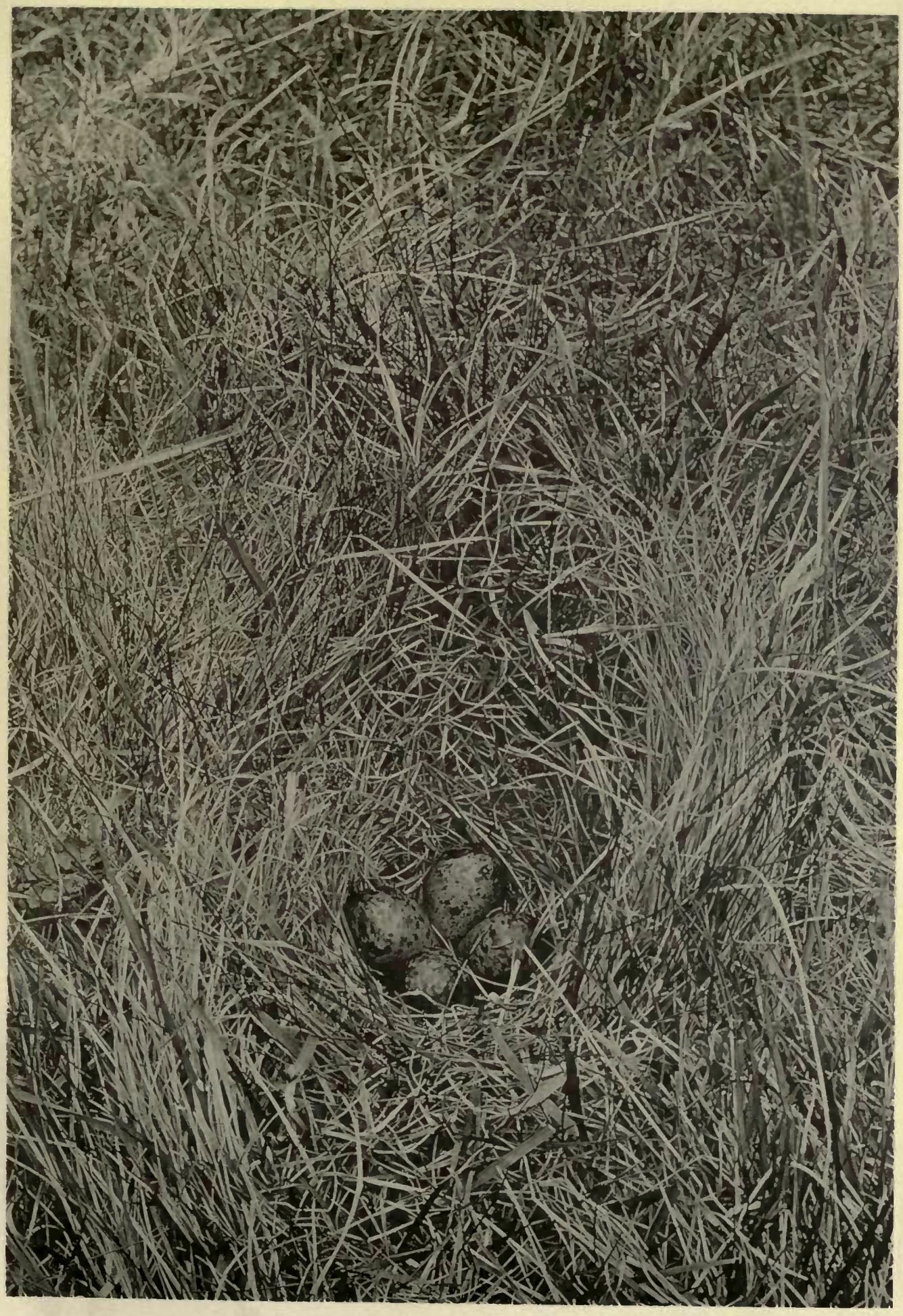
Young in down are most beautiful little creatures; they have the upper parts a rich reddish brown, sprinkled with little bright buff-coloured spots, and mottled with velvety black; the under parts are buffish white. The bill, legs, feet, and claws are black. The young in first plumage are also very beautiful, but they are so well described in many well-known ornithological books that they do not require notice here.

The great southward migration of Dunlins takes place in September, and during that month huge flocks of these little waders may be seen on most of our low-lying coasts.

PLATE I

DUNLIN. *Tringa alpina*

May 20th, 1895.—I paid a visit to a low-lying grassy island in one of the lochs in Central Scotland, to obtain some photographs of the nests of the Tufted Duck. The whole island was simply swarming with Dunlin, but the nests were terribly difficult to find; and although the birds were running about the grass at my feet, I searched for more than half an hour before I came across my first nest. It was most artfully hidden in the centre of a tuft of grass, which hung down all round the nest, concealing the eggs most effectually. In another part of the island, where the grass was shorter, I found several nests, two of which I photographed. In the Plate will be seen a little ball of earth to the left of the nest; the whole place was covered with these little detached lumps, but how they came there quite baffled us, as the grass grew as thick as a carpet everywhere, and there were no broken edges of soil anywhere near—besides, it was quite eight feet above the highest level of the loch. Although the date was late, nearly all the eggs were quite fresh, and many nests had only two or three eggs in them.



DUNLIN. *Tringa alpina.*

2/3 NATURAL SIZE.

U.C. BERKELEY LIBRARIES
C039321435

QL675
L4
819005 v.3

BIOLOGY
LIBRARY
G

UNIVERSITY OF CALIFORNIA LIBRARY